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MINISTRY OF HEALTH-ETHIOPIA

MODULE 5

Permanent Family planning Methods



MINISTRY OF HEALTH, ETHIOPIA

December, 2024

FOREWORD

The Ethiopian Ministry of Health is currently updating the comprehensive training manual and guide for family planning, which will serve as a resource for trainers to enhance the national family planning (FP) program. Aligned with the global commitment to achieve the Sustainable Development Goals (SDGs), Ethiopia has developed its Health Sector Transformation Plan (HSTP II) along with a detailed FP costing implementation plan (CIP) and issued the FP2030 Commitment aiming at increasing the modern Contraceptive Prevalence Rate (mCPR) to 54% and decreasing the unmet need for FP to 17% by the year 2030. For over twenty years, the Ministry has been steadfast in meeting the family planning needs by providing information and services, and by ensuring the availability of safe, effective, affordable, and acceptable contraceptive options. Ensuring the availability and quality of FP information and services remains a critical objective for Ethiopia in the coming years.

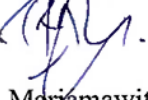
Family planning has been one of the most effective strategies implemented to reduce the high maternal death rate by helping women, men, adolescents, and youth to avoid unintended pregnancies and related complications. Due to these efforts, Ethiopia has come far from its previous high rates of unmet need and low MCPR. Ethiopia's FP2030 commitments issued in 2022 aimed to ensure availability of quality Family Planning information and services, leverage adolescent and youth responsive health system, improve contraceptive commodity security and increase family planning financing all of which are considered in the FP CIP.

Despite Ethiopia's success in expanding access to family planning services, there is still a long way to go to ensure the provision of quality FP services in a sustainable manner. Capacity gap of the workforce is one of the areas that require critical attention. Cognizant of this, the Ministry of Health (MoH) has paid due attention to improve the competency of healthcare providers to provide wide range of contraceptive methods to enhance quality of the FP services.

This module five permanent family planning manual and trainers guide revised under the close supervision and technical guidance of the FP Technical Working Group to bring uniformity and clarity on the training package for a coherent and coordinated capacity building program to make quality family planning services increasingly more accessible for all Ethiopians.

I would like to use this opportunity to call up all family planning stakeholders to support the health sector in building the capacity of FP service providers at all levels of the healthcare system using the revised module 5. I would also like to thank the experts that contributed for revision of the training package and their organizations for their technical support.

Sincerely,



Mariamawit Asfaw (MD, OBGYN, Gynecology Oncologist)

Maternal, Child, and Adolescent Health LEO,

Ministry of Health, Ethiopia

ACKNOWLEDGEMENTS

This family planning training module has been revised with the aim of improving and strengthening the knowledge, attitude, and skills of family planning service providers, and to include recent global updates in family planning service provision.

This was possible through the direct leadership of the reproductive health, family planning, and adolescent & youth health desk and the overall guidance of the Maternal, Child, and Adolescent Health Lead Executive Office of the Ministry of Health.

The review of the training material was done with meaningful engagement of federal and regional government health sectors, Donors, the implementing partners and Professional association through a repeated consultative approach where all stakeholders had played a crucial role in the process.

The meaningful participation and inputs provided from Experts from MOH-MCAHS LEO, donors, implementing partner and Professional associations were also crucial for the review of the Family Planning training module including the participants' manual and the facilitators guide.

Accordingly, MOH would like to extend its sincere appreciation and gratitude to all those who were instrumental in the revision of these national family planning training Modules.

MOH would like to thank major contributors including experts of maternal child and adolescent lead executive office, WHO, Engender Health, ESOG, MSIE, /RC, USAID/QHA, JSI/L10K, EPHA, FHI-360, Packard Foundation, Plan International, IPAS Ethiopia, PSIE, EMwA and FGAE

Finally, MOH would like to acknowledge WHO, FHI-360, Engender health, EPHA, ESOG and JSI/QHA for their financial assistance besides technical support.

APPROVAL STATEMENT OF THE MINISTRY

The Federal Ministry of health of Ethiopia has been working towards standardization and institutionalization of In-Service Trainings (IST) at a national level. As part of this initiative, the ministry developed a national in-service training directive and implementation guide for the health sector. The directive requires all in-service training materials fulfill the standards set in the implementation guide to ensure the quality of in-service training materials. Accordingly, the ministry reviews and approves existing training materials based on the IST standardization checklist annexed on the IST implementation guide.

As part of the national IST quality control process, these Family planning training module for blended learning has been reviewed and revised based on the standardization checklist for online and blended learning and approved by the ministry in June, 2025.



Assegid Samuel Cheru
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Organization

MOH
 Engenderhealth/MOH
 MOH
 MOH
 MOH
 JSI/L-10K
 Engenderhealth
 QHA/JSI
 EMwA
 MSI-RC
 PSI
 FHI-360
 WHO
 Plan International
 WHO
 ESOG
 WHO
 Consultant
 EPHA
 MSI-RC
 UNFPA
 ESOG
 FGAE
 Packard Foundation
 Ipas Ethiopia
 MO H
 MOH

ACRONYMS/ ABBREVIATIONS

ABC	Air way, Breathing and Circulation
AIDS	Acquired Immune Deficiency Syndrome
CAC	Comprehensive Abortion Care
COC	Combined Oral Contraceptives
DMPA	Depot medroxy progesterone acetate
DVT	Deep Venous Thrombosis
EC	Emergency Contraception
FP	Family Planning
Hb	Hemoglobin
HIV	Human Immunodeficiency Virus
IUCD	Intra-uterine Contraceptive Device
LA	Local Anesthesia
MEC	Medical Eligibility Criteria
ML	Mini laparotomy
MOH	Ministry of Health
NSAID	Non-Steroidal Anti-Inflammatory Drugs
NSV	No-Scalpel Vasectomy
PAC	Post Abortion Care
PID	Pelvic Inflammatory Disease
PPIUCD	Postpartum IUCD
REDI	Rapport explore decision making and implementation
RH	Reproductive Health
STD	Sexually Transmitted Disease
STIs	Sexually Transmitted Infections
TL	Tubal Ligation
VDRL	Venereal Disease Research Laboratory
WHO	World Health Organization

Introduction to the module

This module provides comprehensive training for healthcare workers on permanent family planning methods, specifically tubal ligation and vasectomy. It serves as a resource package, offering detailed instructions on providing these services, including In this method-specific participants module you will find additional information on how to use the materials and techniques specific to tubal ligation and vasectomy. Most importantly, you will also find list of medical equipment and supply lists that support you in organizing your health facility for permanent family planning method service delivery in your setup.

This module address, Tubal ligation and Vasectomy as an effective FP methods, counsel and screen clients seeking permanent methods, respond to rumors and misconceptions about permanent methods, provide services for female and male clients, recognize and manage common side effects and complications, and provide follow up care for permanent method acceptors.

Rationale for developing the training manual

This training module is revised after a due observation of extremely low utilization of permanent family planning by eligible clients according to EDHS 2019. This very low utilization of permanent FP methods by clients arises from poor counseling of appropriate clients by family planning providers, and unavailability of trained providers.

So, this training module is designed to support and equip health care workers in developing the knowledge, skills and attitudes needed to provide accurate information and counseling on female sterilization to clients and promote voluntary and informed choice. In addition, it can also be used to train physicians, nurses, midwives and other health care providers to perform tubal ligation for female, and vasectomy for male.

Core competency of the module

- Counsel for Permanent Family Planning methods
- Conduct through client assessment and decide on eligibility criteria
- Provide permanent family planning methods

Course Syllabus

Module Description: -This clinical training module is designed to provide Permanent Family Planning Methods (Tubal ligation and vasectomy) so that to increase access and quality service up take of permanent family planning method. This module can be given as part of 11-days permanent family planning or can be provided as a standalone module

Course Goal: This clinical training module is designed to provide Permanent Family Planning Methods (Tubal ligation and vasectomy) so that to increase access and quality service up take of permanent family planning method

Training Materials

- Flipchart and markers
 - Power point presentations: Included at the end of Chapters.
 - LCD projector and computer
 - Video show (clips)
 - Anatomical charts of female and male reproductive organs
 - Anatomic models (scrotal, Zoe)
 - Facilitator's Guide and Participant manual
- Instruments and equipment: See the list in Annex –A

Training/Learning Methods

- Interactive PPT presentations
- Discussions
- Brainstorming
- Individual reflection
- Group activities
- Video show
- Case studies
- Role plays
- Simulated skills demonstration and practice with anatomic models
- Guided clinical practice/activities.

Trainers' selection

- The trainer should have actively work in clinical setting having training facilitation skills training AND
- Demonstrated Knowledge and skill with adequate period of experience AND
- TOT on Permanent methods of FP is mandatory

Trainees' selection criteria

- The trainees for this module should be clinicians (Physicians, IESO, Health officers, MSc. Clinical Midwives, Midwives and Nurses) involved in provision of family planning services.

- The trainees from each facility are selected as teams of 2: 1 Surgeon (Physician/Health Officer), 1 surgical assistant (Midwives/NURSES)

Methods of Evaluation

- **Participant evaluation**

- **Formative Evaluation**

- Observation using checklists for clinical skills (during demo and guided clinical practice)

- **Summative assessment**

- Posttest knowledge assessment

- Skill checkout examination

- **Module evaluation**

- Daily evaluation
 - End of training evaluation

Certificate criteria

- Full attendance **AND**
- Post test score contribute 40% and skill evaluation constitute 60% and the criteria should meet equal to or greater than 75% **and** performing at least 5 solo procedures

Module Duration

- 11 Days

Suggested Training Composition

- 12 clinical care providers
- 4 clinical trainers/facilitators
- 3:1 ratio

Training venue

- Accredited CPD center
- **CEU:** 15 points

Training coordinator: 2

Course Schedule

Date	Time	Activity/Chapters	Duration	Facilitator
Part I Tubal Ligation				
Day 1	8:30 – 9:00am	Welcoming and opening	30 min	
	9:00 – 9:40am	Pre training assessment	40 min	
	9:40 -10:30 am	Chapter 1: Introduction to permanent family planning methods	50 min	
	10:30 – 11:00	Health break	30 min	
	11:00 – 12:00	Chapter 2: Overview of tubal ligation	60 min	
	12:00 – 12:40	Chapter 3: Health facilities assessment for TL team, equipment, instruments and supplies.	40 min	
	12:40 – 13:40	Lunch		
	13:40 – 14:30	Chapter 4: Method specific counseling for TL	50 min	
	14:30 – 15:30	Chapter 5: Pre procedure client, assessment and preparation for TL	60 min	
	15:30 – 16:00	Health break		
	16:00- 16:20	Chapter 5: Pre procedure client, assessment and preparation for TL	20 min	
	16: 20 – 17:20	Chapter 6: Analgesia and Anesthesia for TL	60 min	
	17:20 – 17:30	Daily rap up		
Date	Time	Activity/Chapters	Duration	Facilitator
Day 2	8:30 – 9:00	Recap	30min	
	9:30 – 10:30	Chapter 6: Analgesia and Anesthesia for TL	60 min	
	10:30 – 11:00	Health break		
	11:00 – 12:30	Chapter 7 a & TL procedures with ML under LA: Simulated skills demonstrations and practice of TL (10Hrs)	90min	
	12:30 – 13:30	Lunch		

	13:30 – 15:30	Chapter 7 a & TL procedures with ML under LA: Simulated skills demonstrations and practice of TL	120min	
	15:30 – 16:00	Health break		
	16:00 – 17:30	Chapter 7 TL procedures with ML under LA: Simulated skills demonstrations and practice of	90min	
	17:30	Daily rap up		
Day 3	8:30 – 9:00	Recap		
	9:00 – 10:30	Chapter 7 TL procedures with ML under LA: Simulated skills demonstrations and practice of TL	90min	
	10:30 – 10:45	Health break		
	10:45 – 12:30	Chapter 7 TL procedures with ML under LA: Simulated skills demonstrations and practice of TL	105min	
	12:30 – 13:30	Lunch		
	13:30 – 15:30	Chapter 7 TL procedures with ML under LA: Simulated skills demonstrations and practice of TL	120min	
	15:30 - 15:45	Health break		
	15:45 - 17:30	Chapter 7 TL procedures with ML under LA: Simulated skills demonstrations and practice of	105min	
	17:30	Daily rap up		
Date	Time	Activity/Chapters	Duration	Facilitator
Day 4	8:30 – 9:00	Recap		
	9:00 – 10:00	Chapter 8 Post procedure care and follow up for TL by ML	60 min	
	10:00 – 10:30	Chapter 9 Complication of BTL Prevention and management. (2hrs)	30 min	
	10:30 – 11:00	Health break		
	11:00 – 12:30	Chapter 9 Complication of BTL Prevention and management.	90 min	
	12:30 – 13:30	Lunch		
Day 4	13:30_ - 14:20	Chapter 10: Overview of vasectomy	50 min	

	14:20 – 14:50	Chapter 11: Health facilities, vasectomy team, equipment, instruments and supplies	30 min	
	14:50 – 15:20	Health break		
	15:20 – 16:00	Chapter 12: Method Specific Counseling for vasectomy	40 min	
	16:00 – 17:30	Chapter 13: Pre procedure client assessment and preparation for vasectomy	90 min	
	17:30	Daily rap up		
Day 5	8:30 – 9:00	Recap		
	9:00 - 10:30	Chapter 14:Vasectomy procedure: Introduction, No-scalpel vasectomy under local anesthesia (2 hr)	90min	
	10:30 – 11:00	Health break		
	11:00 – 11:30	Chapter 14:Vasectomy procedure: Introduction, No-scalpel vasectomy under local anesthesia	30min	
Date	Time	Activity/Chapters	Duration	Facilitator
Day 5	11:30 – 12:30	Chapter 14:Vasectomy procedure: Simulated skills demonstrations for vasectomy (8 hr)	60min	
	12:30 – 13:30	Lunch		
	13:30 – 15:30	Chapter 14:Vasectomy procedure: Simulated skills demonstrations for vasectomy	120min	
	15:30 – 15:45	Health break		
	15:45 – 17:30	Chapter 14:Vasectomy procedure: Simulated skills demonstrations for vasectomy	105min	
	17:30	Daily rap up		
Day 6	8:30 – 9:00	Recap		
	9:00 – 10:30	Chapter 14:Vasectomy procedure: Simulated skills demonstrations for vasectomy	90 min	
	10:30 – 10:45	Health break		
	10:45 – 12:30	Chapter 14:Vasectomy procedure: Simulated skills demonstrations for vasectomy	105min	

	12-30 – 13:30	Lunch		
	13:30 – 15:00	Chapter 14:Vasectomy procedure: Simulated skills demonstrations for vasectomy	90min	
	15:00- 15:15	Health break		
	15:15 – 15:45	Chapter 15: Post procedure care and follow up for vasectomy	30min	
	15:45 – 16:45	Chapter 16:Complications of vasectomy: Prevention and management	60 min	
	16:45 – 17:30	Posttest /evaluation	45m	
Day 7 – day 11		Practical attachment to selected health facilities	5 days	

Chapter One INTRODUCTION TO PERMANENT FAMILY PLANING METHODS

Time:50 minutes

Chapter description:

This chapter is designed to equip the trainees with the knowledge, skills and attitude on permanent family planning methods specifically describe types of family planning,how PM family planning works

Primary Objectives

At the end of this chapter participants will be able to

- Describe permanent family planning methods

Enabling objectives

At the end of this Chapter participants will be able to:

- Describe the types of permanent FP methods
- Explain permanent family planning as a safe and effective methods
- Explain how permanent FP method works
- Discuss the characteristics of permanent FP methods

Chapter out line

- 1.1 Introduction to the types of permanent FP methods
- 1.2 Characteristics of permanent FP methods
- 1.3 Summary

1.1 Introduction

This part begins with a reflection about the permanent FP method to assess participants understanding on the method after they discussed in pair with a person by their side.

Think



Pair



Share



Activity 1:A Think- pair- share)

Instruction

Make a pair with a side participant

5 minutes Q: What do you understand about permanent family planning methods?

Time :10 Minute

Globally, permanent methods are the most commonly used methods of contraception, but they are the least utilized methods in Ethiopia. However, with effective counseling and improved access to quality service in/on? Permanent methods of contraception, it is possible to improve the acceptability of the methods in the community.

Permanent FP methods, also called voluntary surgical contraception (Tubal Ligation and Vasectomy), are among the most effective, popular and well-established contraceptive method options

For individuals and couples desiring no more children, it provides the most effective protection against pregnancy. The risk of major complications is minimal if the procedure is performed as per clinical standards. It is a onetime procedure and no need for continued contraceptive supplies.

How TL and vasectomy works

Tubal ligation and vasectomy are permanent contraceptive methods in which surgical procedure blocks the fallopian tubes in female and vasa deferentia (vas deferens singular), in male to prevent fertilization
Characteristics of Permanent FP methods:

There are a number of simple and safe techniques of tubal ligation and vasectomy that can be carried out as outpatient procedure. Most clients can go home the same day after the pro
Side effects and complications are rare. Tubal ligation and vasectomy can be carried out under.

1.2 Characteristics of permanent FP methods

Local anesthesia. Before the procedure, preparations including counseling are very important to ensure



Activity :1: B group work

Instruction

- What are the characteristics of permanent family planning methods?
- How permanent method works?

Time 20 min

understanding, cooperation of the client, minimize fear and regret. Tubal ligation in extreme obesity, requires general anesthesia.

Whenever general anesthesia is required, it should be administered by a properly trained health professional in a health care setting that can appropriately handle anesthesia related complications. Both permanent FP methods should be carried out under strict aseptic conditions and practices to avoid infection.



1.3 Summary

- There are two types permanent Family planning methods -TL and vasectomy
- Works by closure/ ligation of vas deferens in male and fallopian tube females
- Safe and effectiveness methods with minimal side effects
- Permanent Family planning method needs method specific effective counseling

Chapter 2: Overview of Tubal Ligation

Time a 60 minute

Chapter Description - This part of the module designed to equip the trainees with the knowledge, skills and attitude on permanent family planning methods, specifically tubal ligation and vasectomy, serving as a resource package offering detailed instructions on providing these services, including specific guidance for trainees and providers, case studies and role-playing, and additional resources to tailor training to client needs

Primary objectives

To able participants to

- Perform TL as a safe and effective method of permanent contraception following the standard procedures

Enabling objectives

At the end of this Chapter The participants will be able to:

- Describe tubal ligation
- Identify appropriate users for tubal ligation
- Describe characteristics and timing of TL procedure

Chapter outline

- 2.1 Introduction to tubal ligation
- 2.2 Eligibility for tubal ligation
- 2.3 Characteristics of TL
- 2.4 Timing of the procedure
- 2.5 Summary

2.1. Introduction to Tubal ligation (TL):



Activity 1:2: Individual reflection

Question

- What is TL?
- How effective is TL?

Time given 5 min

Tubal ligation is a permanent surgical contraceptive method for women who will not need any more children. It is intended to provide lifelong, permanent (irreversible) and very effective protection against pregnancy. It is done by specifically trained service provider on surgical contraception methods, and it has no long-term side effects.

The fallopian tubes are permanently occluded through ligation so that the egg and sperm cannot travel through tube to meet each other. Tubal ligation is the world's most widely used modern family planning method. However, it is the least utilized method in Ethiopia.

Effectiveness:

Tubal ligation is one of the most effective contraceptive methods with small risk of failure and with a rate of less than 1 pregnancy per 100 women in the first year of use.

Methods of tubal ligation:

Even though there are different methods of tubal occlusion, the most common method practiced in Ethiopia is the Modified Pomeroy method. With this approach, a loop of Fallopian tube is tied and the knuckle of tube above the tie is cut.¹

NB: The resected loop or segment should be in the isthmus portion (the narrowest part of the fallopian tube.) where the diameter of each stump will be the same if fibroidectomy, or occlusion of the tube out toward the fimbria where the diameter of the lumen is larger, increases the risk of re-canalization resulting in failure. The tubes of a postpartum client may be engorged or edematous, and thus require more precaution while tying.

2.2. Surgical approaches for tubal ligation:

- a. **Mini laparotomy:** a simplified laparotomy approach using an incision of 3 cm to 5 cm in length. A transverse incision is made under the umbilicus for postpartum TL and a transverse supra-pubic incision is used for interval or post-abortion TL under Local anesthesia.

Mini laparotomy, has the following advantages:

- it can be offered more widely than laparoscopy because it can be performed by a broader range of providers and can be offered in a variety of settings
- It can be used during postpartum
- It requires simple and inexpensive surgical equipment

- b. **Laparotomy:** is an incision of the abdominal wall that extends over 5 cm in length to be used when TL is performed in conjunction with caesarean section or another gynecological operation. If a laparotomy is required, regional or general anesthesia should be used.

- c. **Laparoscopy:** uses endoscopic equipment through a tiny incision under the umbilicus to access and occlude the tubes (it is not commonly done in our country).

2.2. Who is eligible for Tubal Ligation as Method of Contraception?



Group Activity 1:2: A:3: group work

Question Open Handout 1-1, and to read discuss in group for 20 minutes. After the small group discussion review and briefly discuss Who can and can't have TL?

Time allowed is 20 min

With proper counseling and informed consent any women can have TL

- Any Married or unmarried women
- Do not have husband permissions
- Breast feeding
- Post abortion (within 48 hours after procedure)
- Just gave birth/post-partum (within seven days)
- Are living with HIV with ART or not on ART
- Who have decided to have no any more children/limiters?
- When the woman has health problem that is a precaution to pregnancy or to the use of other family planning methods.

NB: In some of the situation especially careful counseling is important to make sure the women will not regret her decision

Who cannot have TL as Method of Contraception?

- There are no medical conditions that prevent TL.

- Medical conditions that would pose a surgical risk should be controlled or resolved Pre surgery.
- TL is not recommended for anyone who is not sure of her desire for future pregnancies.
- For case specific decision, see the medical eligibility criteria section on Pages 24-25.

2.3. Tubal Ligation Characteristics:



Activity 12: B Individual reflection

Instruction allows the participants to read and reflect on the following

Question

- What are the characteristics of TL?
- And discuss the timing of tubal ligation procedures?

Time given 10 min

- Very effective (low pregnancy rate)
- Takes effect immediately.
- Permanent, one-time procedure leads to life-long and safe protection from pregnancy.
- Cost-effective when cost is spread out over time.
- Nothing to remember, no supplies needed, and no repeated clinic visits required for family planning.
- No known long-term side effects or health risks.
- No effect on breast milk production.
- No interference with sex; does not affect a woman's ability to have sex.
- May increase sexual enjoyment because no need to worry about pregnancy.
- Very private or personal method.
- Requires (skilled professionals, suitable set up with back up for emergency, aseptic conditions, medications, and surgical equipment).
- Reversal surgery is difficult, expensive and not available in most areas; successful reversal is not guaranteed.

Rare complications of surgery include:

- Infection or bleeding at the incision site.
- Intrabdominal or pelvic organ infection.
- Intraabdominal or pelvic organ injury.
- Anesthesia risk (allergic reaction or overdose with local anesthesia or IV administration followed by cardiorespiratory arrest)
- TL prevents occurrence of pregnancy as a result it also prevents ectopic pregnancy.
- If it fails, the likelihood of ectopic pregnancy is proportionally higher than cases with no TL
- TL offers no protection against sexually transmitted infections (STIs including HIV/AIDS)

2.4. Timing of procedure

The following timings are all equally acceptable when performed according to guidelines:

a. INTERVAL TUBAL LIGATION

This implies TL which is done any time when one is sure that the client is not pregnant, or

beyond six weeks after delivery or abortion

b. POSTPARTUM TUBAL LIGATION

This implies TL which is done immediately or within seven days after giving birth, at which time the uterus is still an abdominal organ. If the procedure is not done within seven days it can be done after six weeks.

c. POST-ABORTION TUBAL LIGATION

This implies TL which is done within the within 48 Hours post-abortion or after six weeks, but other methods should be used in between.



2.5 Summary

There are two types of permanent Family planning methods

-TL and vasectomy

Works by closure/ ligation of vas deferens in male and fallopian tube females

Safe and effective methods with minimal side effects

Permanent Family planning method needs method specific effective counseling

Chapter.3 Health Facilities, Mini laparotomy Team, Equipment, Instruments And Supplies

Time: 40 minutes

Chapter Description; This chapter is intended to equip participants with better knowledge on equipments and supplies needed for mini laparotomy

Primary objectives

At the end of this chapter participants will be able to

- **List types of equipment and supplies needed to perform mini laparotomy**

Enabling objectives:

At the end of this section participants will be able to:

- Identify the facilities requirements, equipment, instruments and supplies for safely provide TL by ML.
- Describe the members of the TL by ML team and their role.

Chapter outline
3.1 Tubal ligation by mini laparotomy facility, equipment, instruments and supplies and emergency equipment /drugs
3.2Tubal Ligation by mini laparotomy surgical team
3.3 Summery

3.1 Tubal ligation by mini laparotomy facility, equipment, instruments and supplies and emergency equipment /drugs

The TL by ML facility and equipment, instruments and supplies needed:

Tubal ligation by Mini laparotomy under local anesthesia can be performed at almost any facility that has surgical capacity, from a separate outpatient facility to a hospital-based facility. Sites need to respond appropriately to ensure delivery of quality and efficient services, with attention to clients' comfort and satisfaction.

For the provision of high-quality TL by ML services, a facility needs:

- The health facility should have counseling, procedure, recovery and changing rooms
- Electricity or alternative source of power: a reliable source of electricity or alternative source of power is preferable to provide light for the procedure and for instrument processing.
- Backup batteries operating light
- Water supply

- Emergency backup/preparedness: The facility must always have on hand all equipment, supplies, and drugs needed to stabilize a client who experiences a complication (See table I-1 for the list). The facility should also have procedures for ensuring referral to higher-level facilities for further care, if needed. This includes ensuring the availability of prompt transport to such facilities if emergencies arise.

The equipment, instruments, and supplies needed for performing mini laparotomy are generally available in most facilities where surgical services are offered. Table I-1 below lists the basic equipment, surgical instruments, and supplies needed for mini laparotomy. Figure I-1 shows the two specialized instruments—the uterine elevator and the tubal hook—that are needed for the mini laparotomy procedure. Figure I-3 shows the instrument sets needed for inserting the uterine elevator (used with the supra-pubic procedure).

Figure I-3: Instruments used for inserting the uterine elevator



3.2 The TL by ML surgical team

Mini laparotomy performed under local anesthesia requires a team effort—a group of providers. The surgical team should consist of at least three people: a surgeon, a surgical assistant, and a client monitor. Each member of the surgical team has very distinct responsibilities:

- The surgeon performs the surgery and is responsible for the surgical team's overall



Activity 3:A- Group activity

Group Activity

open Handout 1-2C, and to read and discuss in group for 10 minutes. After the small group discussion review and briefly discuss the roles of each of the team member

1. Surgical Assistant
2. The Client Monitor and/or circulating nurse
3. The Surgeon

Time allowed is 20 min

performance.

- The surgical assistant's main role is to assist the surgeon by optimizing exposure of the uterus and fallopian tubes (by handling the retractors), cutting sutures, and anticipating the surgeon's needs by making all the instruments ready and accessible.
- The client monitor's primary responsibilities are to provide sedative or analgesic drugs, monitor the client's vital signs, and communicate with the client (reassuring her during the procedure, checking the effectiveness of the anesthesia, and observing for any early sign of complications). The client monitor needs to be appropriately trained on these tasks and must promptly alert the surgeon of any sign of complications; in some services, anesthesia-related tasks are performed by an anesthesiologist/anesthetist. The client monitor also performs the role of circulating nurse.

Tasks of the Surgical Assistant:

- Prepares the surgical room set up with good light and bed position
- Makes the needed instrument, supply, and IP materials ready near the procedure site
- Helps the client to bed and position
- Puts on surgical garments, including surgical cap and mask.
- Performs a surgical scrub according to infection prevention standard procedures.
- Lifts a sterilized gown from its pack or container without contaminating the outside and puts on the gown.
- Puts on sterile gloves.

- Opens sterile bundles.
- Organizes sterile instruments on the instrument table.
- Arranges and keeps the table neat throughout the procedure with due consideration to maintain the sterility of surgical field.
- Creates a safety zone in the surgical field for passing sharp instruments.
- Assists the operating doctor to gown and glove.
- Assists the operating doctor to drape the client.
- After verifying drug strength, withdraws the local anesthetic from the vial held by the circulating nurse.
- Assists the surgeon with the procedure, using gentle technique to minimize client discomfort and tissue trauma.
- Verbalizes presence and/or passing of sharp instruments during the procedure to avoid injury of surgical team members.
- Makes available appropriate suture material with precaution to avoid needle stick injury.
- Place all soiled instruments and reusable linens directly into soap solution after completed use.
- Places wastes in appropriate places: sorting as medical waste, general waste and sharps.
- Monitors maintenance of sterile technique. If sterile technique is broken, removes the surgical gown, rescrubs, if needed, and re-gowns.

Tasks of the Client Monitor and/or circulating nurse:

- Puts on surgical garments, including surgical cap and mask.
- Ensures that suction and oxygen equipment are available and operational.
- Ensures that intravenous supplies are available.
- Takes a baseline and monitors the client's vital signs, blood pressure, pulse, and respiration rate. Reports any changes to the operating doctor.
- Fills out the surgical procedure section in the client record form.
- Communicates with the client, maintaining eye and touch contact with the client.
- Watches for signs of stress.
- Reports any increased discomfort of the client to the surgical team.
- Places all soiled needles and syringes directly into safety box
- Follows established procedures for assisting the client to the recovery room. Ensures that the client is not left unattended.
- Ensures that the client's record form has been completed and accompanies client to the recovery

area.

- Ensures that a sterile laparotomy tray is available for emergency surgery.
- Ensures extra supplies and instruments are available in case of a break in sterile technique.
- Greets and assists the client to the operating table.
- Gives premedication to client.
- Places the sphygmomanometer on the client's arm.
- Drapes the client with unsterile drapes; positions her clothing to expose the abdomen.
- Verifies that the incision area is clean; clips hair from incision site, if long.
- Places sterile bundles on the table and opens the outer covers for the surgical assistant.
- Prepares a vaginal tray for vulvar cleansing, pelvic examination, and insertion of the uterine elevator.
- Assists with the vaginal exam, as needed.
- Wearing gloves, places the used/soiled vaginal instruments in a container of soap solution
- Places sterile bundles on the table after opening the outer covers for the surgical assistant.
- Removes the contaminated vaginal tray from the room after use.
- Ties gowns for scrubbed persons.
- Pours solutions into sterile bowls on the instrument table.
- Adjusts light as needed.
- Monitors the team's sterile technique, being prepared to provide additional drapes, instruments, and changes of gloves, as needed.
- Provides material to dress the wound after the procedure.
- Wearing gloves, cleans the operating table and area of blood spills and other organic material, using a soap solution.
- Ensures that all instruments and reusable needles and syringes have been placed in a soap solution
Pre leaving the operating room.
- Places gowns, drapes, and other reusable materials in a leak-proof container to carry for laundering.

Note: Decontamination of linen is impractical and not recommended. while wearing heavy-duty gloves carry contaminated linen in a leak-proof bag to the laundry.

- Washes hands.
- Prepares the room for the next case.

Tasks of the Surgeon

- Leads the surgical team
- Assesses the client and help her or verifies the client has reached informed decision, provides her with needed information
- Does pelvic assessment and places the uterine elevator
- Determines the incision site
- Put surgical cap and mask
- Performs surgical scrub
- puts on surgical gown, .
- Puts on sterile gloves.
- Cleans the procedure/operation site with iodine solution
- Drapes the incision site
- Verify the incision site
- Applies local anesthesia
- Provides direction to the assistant on how to help
- Enters the abdomen by opening layer by layer
- Accesses, identifies, ligates and cut tubes loops
- Makes sure there is no bleeding and secures hemostasis
- Closes the abdomen layer by layer and applies dressing
- Provides post-producers e instructions and follow-up as needed



3.3 Summary

What would be needed at health facilities to provide TL by ML?

- Mini laparotomy can be performed at almost any facility that has surgical capacity
- All the three team members with three distinct responsibilities work as a team Emergency preparedness is mandatory for service provision

CHAPTER FOUR METHOD SPECIFIC COUNSELING FOR TUBAL LIGATION

Time allowed 50 minutes

Chapter description; This part of the module designed to equip the trainees with the knowledge, skills and attitude on permanent family planning specifically on tubal ligation

Primary objectives

- Demonstrate proper client method specific counseling, assessment and preparation for TL by ML following the standard procedures and guidelines.

Enabling Objectives

At the end of this Chapter participants will be able to: -

- Conduct appropriate method specific counseling on tubal ligation
- Demonstrate counseling for tubal ligation

Chapter outline

- 4.1 Introduction to general counseling
- 4.2 Method specific counseling for TL
- 4.3 Follow-up Counselling:
- 4.4 Informed Choice and Informed Consent
- 4.3 Summary

4.1. Introduction *General Counselling:*

Should be done for all the clients seeking for family planning services. The main aim of general counselling is to provide informed choice to enable them to take a decision regarding the type of contraceptive method to be used. However, in all cases method specific counselling on the chosen method must be given.

4. 2 *Counselling on Tubal Ligation*

The following steps should be ensured before the client signs the consent form:

- **Clients have been counselled wherever required in the language they understand.**
- Clients have been informed of all the available methods of family planning and procedures.
- Clients have been made to understand what may happen before, during and after the surgery, its side effects and potential complications.
- Clients have made an informed decision for sterilization voluntarily.
- The following features of the sterilization procedure should be explained to the client:
- It is a permanent procedure for preventing future pregnancies and not reversible.
- The client must be informed of unpredictable circumstances (for example losing their children, getting divorced or remarried, or wishing for additional children), may lead users to regret.

- It is a simple surgical procedure that involves small incision to the lower abdomen.
- The fallopian tubes are tied and cut; eggs released by the ovaries cannot move down the tubes, so they do not meet sperm, hence stopping a pregnancy occurring. It is effective immediately.
- The procedure lasts for about 20 minutes, afterwards the client can recover for a few hours before going home.
- After a short period of rest, the client can return to normal life (1–2 days rest at home, avoid heavy lifting for 1 week). Need to keep bandage dry for two days.
- Afterwards it will not affect the client's strength or ability to perform normal day-to-day functions.
- It is a surgical procedure that has a possibility of complications, including failure,
- requiring further management.
- It does not affect sexual pleasure, ability, or performance, the client can do sex at any time of her convenience after the procedure, preferably after 7 days.
- Tubal Ligation does not protect against RTIs, STIs and HIV/AIDS.
- The client has to give informed written consent.
- It will not affect the client's strength or ability to perform normal day-to-day functions.
- Sterilization does not protect against RTIs, STIs and HIV/AIDS.
- A reversal of the surgery is possible but the reversal involves major surgery and the success of which cannot be guaranteed.
- In the unlikely event of any complication / failure/ death there is a redressal mechanism available in the form of an indemnity coverage.

4.3 Follow-up Counselling:

The information provided after the procedure is reinforced. Service providers need to listen attentively and be prepared to answer questions the client may have and address problems she has experienced after undergoing the procedure. This helps the client cope with common problems or side effects.

Advise client to return to the facility if there is any missed period/suspected pregnancy, within two weeks to rule out pregnancy.

4.4 Informed Choice and Informed Consent

The concepts of informed choice and informed consent are related but quite different in their intent. The purpose of informed choice is to ensure that all clients choose the best option/s for their health care needs after getting full information about all available options. Informed consent means that a client understands the surgical procedure and other options and then decides to receive the care. However, informed consent alone does not constitute informed choice

The consent of the partner is not required for sterilization. However the partner should be encouraged to

counseling.

Documentation of Informed Consent

The client's signature or putting her thumb impression on an informed consent form is the legal authorization for the sterilization procedure to be performed. The client must always sign or put her thumb impression on the consent form. In case of thumb impression, a signature of a witness (any person not associated with the service facility and chosen by the client) is a must.

Consent for permanent family planning should not be obtained when physical or emotional factors may c a client's ability to make a carefully considered decision about contraception.

Documenting Denial of the service

A client who is unfit for permanent family planning should be counseled and offered another contraception. The reason for denial of sterilization must be documented in the prescribed consent form When a client evaluation indicates permanent family planning to be unsuitable for her either on medical or non-medical reasons, the client record should specify the reasons (e.g. the client has a condition that precludes surgery, client is uncertain about her choice, etc.). Action taken by the provider should also be described (e.g., referral, treatment, etc.). These records should be kept at the service facility where the client was evaluated and the permanent family planning found unsuitable for her.



Activity :4: A: Role play

Instruction

CASE 1, Miss X is 31. She has one daughter and one son, ages 5 and 3 respectively. She and her husband have decided that she should have female sterilization. They love each other very much and do not have any problem. They come to the FP station asking for female sterilization

The role of the counselor – make sure you do effective rapport building. The counselor will use counseling tools.

Observe and comment role play, discuss the detail with the steps and the procedures of permanent method specific counseling skill

The observer uses checklist to see if the counselor follows the steps listed under rapport building in the REDI framework and provides feedback at the end.



4.5 Summary

Method specific counseling for tubal ligation

- FP counseling includes information how to help a client make an informed decision
- Help the client carry out his or her decision and reduce possible regret after the procedure (Since the procedure is irreversible.
- Discusses how traditions or beliefs limit a woman's ability to freely choose and use Permanent methods.
- *The decision to perform the procedure should be based on the best interests of the client, including medical, psychological, social, and cultural factors*

Chapter Five: Pre-procedure assessment of the Client and Preparation For TL By ML

Time: 60 minutes

Chapter description: This chapter of the module designed to equip the trainees with the knowledge, skills and attitude on Pre-procedure assessment of the Client and Preparation For TL By ML

Primary objectives

At the end of this chapter participants will be able to

- Discuss Pre-procedure assessment of the Client and Preparation For TL By ML

Enabling Objectives

At the end of this Chapter the participants be able to:

- Discuss appropriate Pre procedure clinical assessment
- Apply medical eligible for TL
- Explain proper Pre procedure client instructions for TL.
- Describe the steps for preparing clients for TL.

Chapter outline

- 5.1Preprocedural clinical assessment
- 5.2Components of Pre procedure assessment:
- 5.3Eligibility for tubal ligation
- 5.4Pre procedure client instructions
- 5.5Summary

.5.1. Pre procedure Assessment



Activity5: A: Individual reflection

Instruction: Ask participants to reflect on the following question.

Question

Ask participants to tell the need for and importance of preoperative client assessment?

What are the components of Pre procedure client assessment?

Time 10 minutes

Pre procedure assessment is essential in the provision of tubal ligation services. It can also be an

opportunity to do an overall health screening, a factor of considerable importance in countries where many people rarely visit health facilities or where health services are inadequate.

The objectives of the Pre procedure assessment are

- To ensure that the client's decision is voluntary and informed
- To determine the client is eligible for tubal ligation.
- To identifies any conditions that may increase the risks associated with the procedure.

All recommendations regarding Pre procedure evaluation, follow-up assume the follow conditions:

- *The client must provide voluntary, informed written consent.*
- *The more remote the service facility is, it is important to identify clients conditions that may increase the risk associated with surgery. The medical determine if such clients can safely undergo procedure in the facility, or if the more fully equipped and staffed medical facility.*
- *The decision to perform the procedure should be based on the best interest client, including medical, psychological, social, and cultural factors.*

The surgeon must conduct or supervise and review all Pre procedure medical evaluation. A trained family planning service provider may carry out preliminary screening (in particular, the medical history), using a standardized checklist.

The family planning service provider must be trained to use the checklist and to identify conditions that would delay, require the procedure to be performed in a different setting, or require special preparations and report these finding to a surgeon for further evaluation and assessment.

The final decision to offer tubal occlusion to the client is the responsibility of the client and the professional who led the surgical team - the surgeon. After reviewing the client's history, the physical findings, and the client's suitability, the surgeon conducts a final medical assessment immediately Pre procedure surgery and reconfirms that the permanent FP method is the voluntary desire of the client. The final evaluation should take place where the procedure is to be performed. Preliminary screening and referral can be done in other places, such as the client's home, health post or a local health center.

4.2. Components of Pre procedure assessment:

- The provider takes a complete medical history and conducts a physical exam;
- Perform laboratory tests if indicated.

Thorough Pre procedure assessment will reduce the occurrence of complication including failure to complete the TL and unexpected admission.

Table 1.4A The Pre procedure client assessment includes:

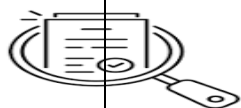
COMPONENT	RATIONALE
Medical History	
<i>General Medical</i>	
Age, number, and sex of living children, age of youngest child, marital status, education, occupation	• Age and information on children helps the provider explore with the client the implications of ending her fertility. • Regret is more likely if the client is young, if her marital status changes, or if she loses a child. • Education may indicate level of literacy, a consideration when giving the client instructions. • Occupation may have implications for after procedure instructions and may provide information about the client's economic situation.
Respiratory conditions, heart disease, hypertension, anemia, diabetes, bleeding disorders, convulsions, pelvic or abdominal surgery	These conditions: • May require management Pre procedure • May increase the risks associated with procedure • May delay surgery/procedure until the condition is resolved or controlled • May increase the risk of after procedure complications
Mental health conditions	These may affect the client's ability to make voluntary informed choice, informed decision and to give informed consent.
Current medications, allergies to medications, and addictions	• Information on medications has implications for: ○ The type of sedation and analgesia to be used ○ The selection of anesthetic drugs ○ The selection of drugs to use for managing complications (e.g., antibiotics) • Such information also may alert the surgeon to medical conditions that should be known Pre procedure/surgery.
Previous experience with anesthesia	• Knowledge of previous experience with anesthesia contributes to decision making about the anesthesia to be used.
<i>Obstetric and Gynecologic History</i>	

COMPONENT	RATIONALE
Pregnancies, abortions, and deliveries	This information is helpful in assessing the client's reproductive intentions and in assuring voluntary informed decision making.
History of pelvic inflammatory disease, vaginal discharge, urinary tract infection, and sexually transmitted infections	- Past infections may have caused scarring and adhesions, which may make surgery more difficult. - Current infection could lead to postoperative/after procedure infection. Note: Pelvic infections must be treated and should be resolved Pre surgery. The procedure should be post ponded for three months after the initiation of the treatment
<i>For the interval client:</i> Date of last menstrual period, regularity of periods, and sexual history in recent past	- By determining the date of the last menstrual period, the provider can schedule tubal ligation at a time that will minimize the risk of pregnancy, which may have occurred in the luteal phase and the client may not be aware of it. - A history of amenorrhea may alert the provider to the need to determine the cause of amenorrhea and also rule out pregnancy Pre scheduling the procedure/surgery. - A recent history of regular unprotected sexual intercourse may indicate a risk of pregnancy.
<i>For the interval client:</i> Last contraceptive method used and when	- This indicates the risk (or lack of risk) for pregnancy at the time of surgery. - This information is also useful for counseling the client using hormonal contraceptives.
<i>For the postpartum client:</i> Conditions of the delivery	Postpartum conditions that may increase risks should be explored (e.g., fever, prolonged rupture of membranes, pregnancy-induced hypertension, antepartum and postpartum hemorrhage, and genital trauma).
Physical Examination	
General appearance, nutritional status, and	Malnourished (undernourished and obese) clients may need additional screening to identify operative risk or may need therapy to improve

COMPONENT	RATIONALE
weight	the surgical outcome. Obesity is associated with increased respiratory complications and can make the procedure challenging to perform, due to excessive abdominal fat. It is thus a factor to consider when deciding on the surgical approach and pain management regimen.
Temperature, blood pressure, pulse, and respiratory rate	- These measures may reveal hypertension or infection. - Taking the blood pressure is considered as “essential and mandatory in all circumstances for safe and effective use of the contraceptive method” - These measures also provide a baseline in case of complications during surgery.
Auscultation of heart and lungs	- This may indicate a cardiac condition or lung disease Pre surgery. - The results have implications for the pain management regimen chosen and for the use of antibiotics.
Abdominal examination	- The results of the examination may indicate the presence of infection, organ enlargement, or masses (e.g., umbilical hernia, advanced pregnancy, fibroid, tumor, etc.), as well as the presence of surgical scars. - This examination enables the provider to assess and determine the incision site Pre surgery. - It also helps the provider to schedule surgery appropriately and to determine the type of anesthesia and surgical procedure.
<i>For the interval client:</i> Pelvic examination	- The pelvic examination enables the provider to assess whether the client is pregnant, has an infection, or has other abnormalities. - It also helps the provider to assess the size, position, and mobility of the uterus.
Laboratory Tests	
Hematocrit or	These tests are optional and should be performed as indicated by

COMPONENT	RATIONALE
hemoglobin, and pregnancy test	findings from the history and physical examination. Note: Unnecessary laboratory tests cause delays, raise costs, and contribute little to the quality of care, as long as staff perform a careful Pre procedure assessment.

5.3. Medical Eligibility Criteria for tubal ligation



Activity 1:5: B2 Group work

Instruction Allow to read the MEC

QUESTIONS

What are the medical eligibility criteria for TL?

What are the four conditions to perform TL and identify listed problems under each condition?

Time : 30 minutes

There is no medical reason that would absolutely restrict a woman's eligibility for tubal ligation. Some conditions and circumstances, which should be identified during the preoperative assessment, may indicate the need to take certain additional precautions, however. Appendix C provides screening guidelines for tubal ligation. Medical conditions are classified as:

- **A (Accept)**, most clients are classified under Accept, and their procedure can be performed in most clinical settings.
- **C (Caution)** means the procedure can be performed in a routine setting but with extra preparation and precautions, depending on the condition.
- **D (Delay)** means postpone TL. These conditions must be treated and resolved Pre female TL can be performed. Help the client choose another method to use until the procedure can be performed.
- **S (Special)** means special arrangements should be made to perform the procedure in a setting with an experienced surgeon and staff, equipment to provide general anesthesia, and other backup medical support. For these conditions, the capacity to decide on the most appropriate procedure and anesthesia regimen also is needed. Help the client choose another method to use until the procedure can be performed

When assessing a client for tubal ligation, the provider should also weigh the risks and benefits inherent in a future pregnancy against the risk of surgery.

Table I-5b: Conditions warranting either delay of surgery or observation of special considerations Pre surgery is performed.

Caution:

Moderate iron-deficiency anemia (hemoglobin 7–10 g/dl)

- Severe lack of nutrition (Is she extremely thin?)
- Sickle cell disease
- Inherited anemia (thalassemia)
- Diaphragmatic hernia
- Epilepsy
- Hypothyroidism
- Mild cirrhosis of the liver, liver tumors, or schistosomiasis with liver fibrosis
- Kidney disease

Delay

Related to pregnancy

- Current pregnancy
- 7–42 days postpartum
- Postpartum after a pregnancy with severe pre-eclampsia or eclampsia
- Serious postpartum or postabortion complications (such as infection, hemorrhage, or trauma to genital tract)

Prolonged rupture of membranes (24 hours or more)

- Hematometra (a large collection of blood in the uterus)

Unrelated to pregnancy

- Unexplained vaginal bleeding that suggests an underlying medical condition
- Purulent cervicitis, chlamydia, or gonorrhea
- Pelvic inflammatory disease
- Pelvic cancers (treatment may make her sterile in any case)
- Malignant trophoblast disease

Major surgery with prolonged immobilization

.5.4. Pre procedure Client Instructions**Activity: :5:C: reading and reflection activity**

Instruction: Instruct the participants to open participant manual and read section 1.4C.

Question ask to reflect on the following question

- Why giving Pre procedure instructions to the client?
And give some examples of information or instructions to be given to the client Pre the procedure (individual reflection)
- Ask participants to open Chapter I-4C and briefly review with them the instructions that should be given to the client in preparation for the procedure and the

*steps involved in preparing the client both physically
and emotionally for surgery*

Time allowed 10 minutes

You must be certain that the client understands that TL by ML using LA is a permanent contraceptive method she no longer is able to have children. Even if the reversal of the procedure is available and affordable, return of fertility cannot be guaranteed. Make sure that the client knows that she can change her mind or postpone at any time before the procedure.

N.B. Reversal of TL is not yet performed in our country

Pre procedure information and instructions should be given both verbally and in writing. A responsible adult should accompany the client to the facility on the day of the procedure. Pre procedure information and instructions are important. To inform and reassure the client, these should be given in advance, letting her know what to expect during and after the procedure. This is key to the success of TL.

In preparation for the procedure give the client these information/instructions:

Inform not to eat any solid food for eight hours and liquid food for two hours before the procedure.

- Bring relative/companion to escort her home afterwards and to be with her during the first 24 hours after the procedure.
- Inform to bathe thoroughly, especially the belly and genital area, the night Pre the procedure. (Not to shave)
- Wear clean, loose-fitting clothing when coming to clinic.
- Inform not to take any medication for 24 hours Pre surgery (unless the health care provider instructs).
- Avoid heavy lifting for the week after the procedure. (rest to two to three days)
- Inform the client not to bring valuables to the clinic
- To feel free to ask questions if she has any.

Surgical attire and surgical scrub and gloving: TL by ML team should wear appropriate operating theater clothing, including head cover and mask. The surgeon and surgical assistant must both perform a surgical scrub and must wear surgical gowns and surgical gloves. Abdominal procedures require sterile gloves on surgically scrubbed hands.



5.5 Summary

Pre-Procedural Assessment of the Client and Preparation for TL By ML
Mini laparotomy can be performed at almost any facility that has surgical capacity

All the three team members with their distinct responsibilities work

as a team

Emergency preparedness is mandatory for service provision

Chapter - Six: Analgesia and Anesthesia for Tubal Ligation

Time: 120 min

Chapter description;

This chapter of the module designed to equip the trainees with the knowledge and skills on provision of Analgesia and Anesthesia for Tubal Ligation

Primary objectives

At the end of this chapter participants will be able to:

- Give Analgesia and Anesthesia for Tubal Ligation

Enabling objectives

At the end of this section, the participants will be able to:

- Explain the options of anesthesia and analgesia and for TL by ML.
- Demonstrate proper administration of local anesthesia and analgesia for TL by ML procedures.

Chapter outline

- 6.1 Anesthesia for mini-laparotomy
- 6.2 Medications for mini laparotomy under local anesthesia
- 6.3 Medication before the procedure
- 6.4 Administering local anesthesia
- 6.5 Diamond Shape infiltration technique
- 6.6 Summary

6.1. Anesthesia for mini-laparotomy

The aim of Local anesthesia, used with or without mild sedation and analgesia is to reduce the client's anxiety, perception, experience of pain to allow safe performance of a surgical procedure.

It is preferable to general anesthesia because it is:

- Safer than general, spinal, or epidural anesthesia
- Lets the woman leave the health facility sooner
- Allows faster recovery
- Makes it possible to perform TL in more facilities
 - Considerably less expensive than general anesthesia
 - Easy to administer

- Less risky
- Promotes gentle surgery
- Adequate to allow the procedure to be done without significant risk to the client

Because clients are usually awake during properly administered local anesthesia, the following are basic components of successful management of anesthesia for Mini laparotomy procedures (ML/LA):

- Prior provision of information to clients on what to expect during and after the procedure
- Communication with, and support of, clients Pre, during, and after the surgery
- Gentle and precise surgical technique
- Adequate local anesthesia and, if used, appropriate sedation and analgesia

The pre procedure assessment is usually performed before the procedure is scheduled. However, on the day of the procedure, the surgeon should confirm that the client still is a suitable candidate for the procedure to be done under local anesthesia, with or without sedation.

Since anxiety can contribute to acute pain, members of the surgical team should establish a well coming environment and communicate in friendly manner with the client Pre, during, and after the procedure, to help her relax and feel comfortable. She should be told in simple language what to expect Pre each part of the procedure happens, as well as what is being done as it happens.



Activity :6.A Video show

Instruction made the prepared Video show on the procedure of administration of local Anastasia for TL

Questions

Ask the participants weather they are cleared with the video show. If not repeat the video

Ask the participants their reflection from video show

Time allowed 20 min



Activity :6B: Skill demonstration on administer the local anesthesia on anatomical model (Madam Zoe)

- Demonstrate how to administer local anesthesia on madam zoe

Instruction

Time allowed: 80 minutes

6.2. Medications for mini laparotomy under local anesthesia

Mini-laparotomy can be performed under local anesthesia (ML/LA) alone through an appropriately performed field block, while maintaining communication with the client. However, preoperative/Pre procedure medications can be used to decrease fear and anxiety, as well as to sedate clients and increase their comfort. Pre procedure medications and supplemental sedation can reduce pain, prevent during and after procedural nausea and vomiting.

Guiding Principle

- Clients should receive adequate analgesia and sedation to minimize their anxiety and pain and maximize comfort
- In all settings, adequate pain management is feasible
- Drugs used should be safe, affordable, readily available, and in regular supply.
- A readily available and safe local anesthetic drug is used to block pain.
- The lightest depth of sedation and analgesia needed to adequately control pain and anxiety is preferred.
- Pain management begins at the gate Pre the procedure and continues after it.
- Ensure as much comfort as possible for the client.

Lidocaine is the recommended local anesthetic, for the following reasons

- It is widely available.
- It is inexpensive.
- Easy to learn, and most providers know how to use it safely.

The recommended concentration is 1% lidocaine *without epinephrine*. There are two reasons why epinephrine (adrenaline) is not recommended:

1. The vasoconstriction caused by epinephrine may mask bleeding in small blood vessels (it is best to detect and control all bleeding during surgery to prevent /minimize post procedure bleeding and formation of hematomas);
2. Epinephrine is dangerous if accidentally injected intravascular.

In general, *lower-concentration* preparations of lidocaine (1%) are preferred, since they provide the *same amount* of anesthetic in a greater volume; this facilitates infiltration of all layers of the abdominal wall and improves the anesthetic effect. The recommended dosage is 4.5 –5.0 mg/kg of 1% lidocaine without epinephrine, not to exceed 300 mg or 30 ml (depending on the weight of the client). The onset of action of lidocaine without epinephrine is typically three to five minutes, and the anesthetic effect lasts for up to

45 minutes. The variability of the anesthetic's effect depends on the area where it is injected. Local anesthesia should be administered step wise from the skin to the peritoneum layer by layer.

6.3. Medications before the procedure

For sedation: - promethazine diazepam or midazolam (optional)

- Promethazine 25 mg orally 30–60-minute Pre procedure.
- Diazepam, 10 mg orally 30-60 minutes before the procedure (for selected/anxious clients).
- Midazolam 2.5 - 3 mg IM 1 hour pre-operatively/Pre procedure, or 1 -2.5 mg IV in the procedure room.
For analgesia: -Non narcotics, such as a nonsteroidal anti-inflammatory drugs (NSAIDs) diclofenac 75 mg IM 30 min or ibuprofen 800 mg orally administer 45-60 minute before the procedure.

In the procedure room

Atropine 0.4 - 0.6 mg IM 30 min before the procedure (optional)

Analgesia:

Narcotics such as meperidine, nalbuphine, pentazocine, or fentanyl

Post procedure/after procedure

For Pain relief

Ibuprofen 800 mg tab or Diclofenac 75 mg IM or Meperidine (Demerol) 50 mg IM

6.4. Administering local anesthesia

The goal of local anesthesia is to achieve an anesthetic field block that penetrates all layers of the abdominal wall, from the skin to the peritoneum.

- The three layers most sensitive to pain are the skin, the rectus fascia, and the peritoneum (**Fig. I-5**).
- Each of these layers should be carefully infiltrated with local anesthetic.
- Additionally, dripping anesthetic over the fallopian tubes reinforces the effect of the anesthesia, as it decreases pain resulting from the manipulation of the tubes and also reduces postsurgical/after procedure pain.

The best option for performing the anesthetic block is the **diamond-shape** technique. Lidocaine 1% *without epinephrine*, at a dose of 4.5 mg/kg of body weight (in general, the maximum total does not exceed 300 mg), is the recommended local anesthetic.

.6.5. Diamond-Shape Infiltration Technique:

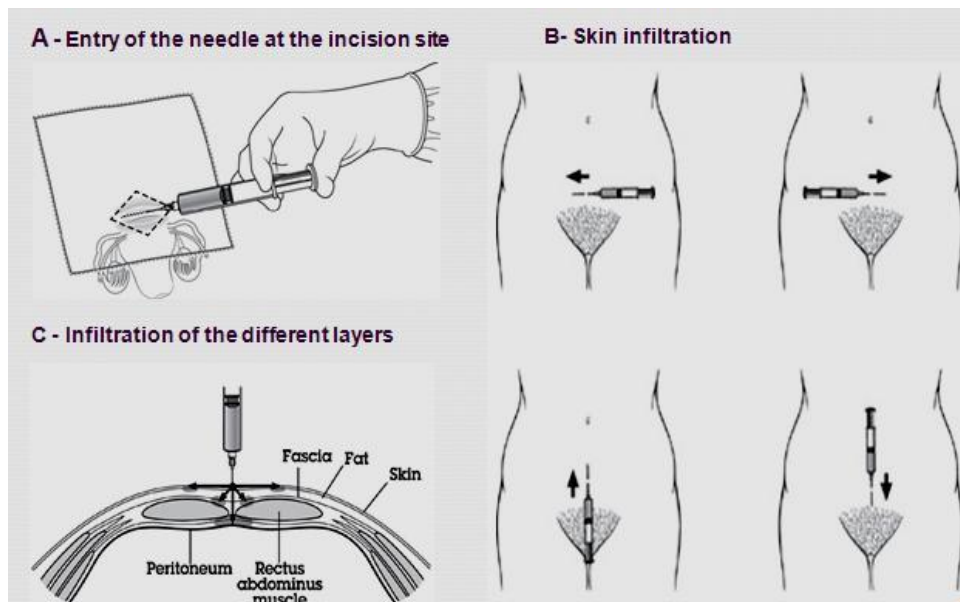
- Tell the client that she may feel the initial sharp pain with the “prick” of the needle and a burning sensation while the anesthetic is injected.

- Introduce the needle through the skin at the midline of the incision site and advance the needle into the intra-dermal tissue, first to one side of the planned incision site (*Fig. I-6A*). Advance the full length of the needle (1.5 in.) without releasing any of the anesthetic.
- Gently aspirate it to ensure that the needle has not entered a blood vessel.
- Withdraw the syringe while slowly injecting 1 to 1.5 cc of 1% lidocaine without epinephrine into the tissue, until the tip of the needle is at the site of skin entry.
- Repeat this step three times, injecting lidocaine into the tissue horizontally toward the other side of the planned incision and then in the direction of the client's head and of the client's feet (*Fig. I-6B*), thereby creating a diamond shape. A total of 4 to 6 cc should be injected into the skin layer.
- Infiltrate the fascial layer, following the same steps as above. Repeat the same four-direction infiltration, but at a 45° angle relative to the skin (*Fig. I-6C*).
- After every needle movement always aspirate first.
- Infiltrate the peritoneal layer by introducing the needle into the center of the planned incision site at a 90° angle to the peritoneum and injecting about 2 cc of lidocaine. Be sure to appropriately infiltrate the peritoneum (*Fig. I-6C*).
- After opening the peritoneal cavity visualizing the funds and the fallopian tubes, located on either side of the uterus, can be anesthetized by dripping about 2–3 ml of lidocaine solution over them and over the cornua of the uterus., 2-3 ml of 1% lidocaine may be flowed onto each tube and the uterus.

NB:

- Achieving an appropriate field block of local anesthesia usually requires at least 20 cc of 1% lidocaine without epinephrine.
- Wait at least three minutes for the anesthetic to take effect, and then test its effectiveness by pricking the area with a needle or a surgical dissecting forceps.

Figure I-6 Field block using the diamond-shape technique



As in any abdominal surgery, client monitoring is essential. Monitor vital signs regularly during and after the procedure until the woman is fully recovered and alert. It is of special importance using the use of local anesthesia, especially if sedatives and analgesics are also used, as the drugs may cause respiratory depression, cardiovascular depression, hypersensitivity reaction or central nervous system toxicity. Client monitoring consists of observing and recording the client's vital signs—respiratory rate, pulse, and blood pressure.



Activity 6.C: Video show

Ask the participants their reflection from video show

Time allowed 20 min



Activity :6 D skill demonstration

Instruction

Set-up a demonstration and participant practice areas one practice area per 4 participants (organized in teams of 1 surgeon and 1 surgical assistant).

Prepare the clinical practice venue for the training. Make sure: availability of all equipment's needed for simulation training to administer local Anastasia

Encourage participants to practice how to administer local anesthesia

Give feedback for each participant



6.6 Summary

Ensure that all medication are given timely as per the standard

Administer the recommended lidocaine without epinephrine dose properly and safely layer by layer and wait 3-5minute for the effectiveness

Chapter 7 : Tubal Ligation by ML Procedure under Local Anesthesia

Time: 10 hours

Chapter description - This chapter of the module is designed to equip the trainees with the knowledge, skills and attitude on permanent family planning methods, specifically tubal ligation, serving as a resource package offering detailed instructions on providing these services, including specific guidance for trainees and providers, case studies and role-playing, and additional resources to tailor training to client needs

Primary objectives

At the end of this chapter participants will be able to:

- Demonstrate the standard post procedure care and follow up for TL by ML

Enabling Objective

At the end of this Chapter the participant will be able to:

- Demonstrate **tubal ligation** with **mini laparotomy**

Chapter outline

- 7.1 Client evaluation and preparation
- 7.2 Positioning the Client:
- 7.3 Inserting the Uterine Elevator
- 7.4 Entering the Abdomen:
- 7.5 Ligating the Fallopian Tubes using the Modified Pomeroy technique
- 7.6 Closing the Abdomen:
- 7.7 Post procedure Tasks:

7.1. Client evaluation and preparation

Although the Pre procedure assessment has already been conducted, be sure to perform the following activities

- Greet the client
- Verify the client's understanding of the procedure
- Check compliance with preoperative/Pre procedure instructions
- Verify the client's informed decision and consent by asking if she still wants the tubal ligation
- Verify written informed consent is signed
- Take vital signs
- Review with client information in her record, review reproductive health and pertinent general medical history to verify absence of pregnancy and infection, or any other conditions that could require delaying the procedure
- Confirm by history and by reexamination the absence of pregnancy.

- Provide sedative and analgesic

After the decision has been made to proceed with the TL/LA procedure, prepare the client before she enters the procedure room:

	Activity 7 A demonstration of TL under Question Refer hand out I-6L and M (Learning guide for interval TL by ML clinical skills and Learning guide for postpartum TL by ML clinical skills) Time allowed is 40 min
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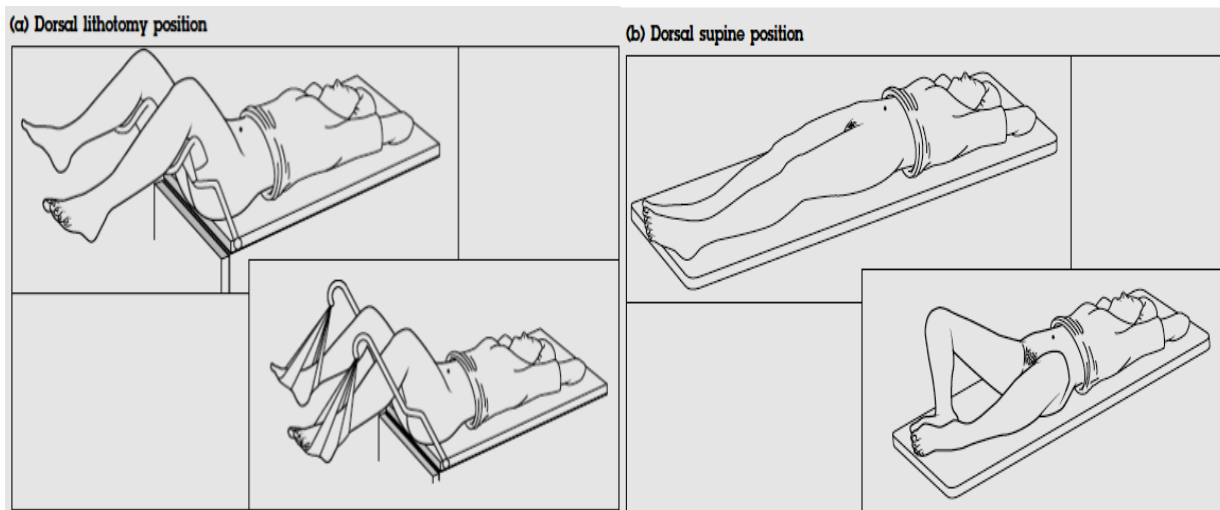
- Verify that the client understands the most important steps of the procedure (e.g., what local anesthesia means, what she might feel at various times, and that she may be asked to “assist” during the procedure by taking a deep breath).
- Ask client to empty her bladder just prior to entering the procedure room
- Provide a surgical gown for the client and give her a private place in which to change.

7.2. Positioning the Client:

Escort the client into the procedure room help her onto the surgical table. Positioning the client for a supra-pubic procedure should involve considerations of both client comfort and ease of access to the surgical area. Since access to the fallopian tubes is facilitated using the uterine elevator, the most common positions used are the dorsal lithotomy position (**Figure I-7a**) and the dorsal supine position (**Fig. I-7b**).

Note: The dorsal supine position is recommended for sub-umbilical mini-laparotomy.

Figure –I-7a: Positioning the client for mini laparotomy.



7.3. Inserting the Uterine Elevator:

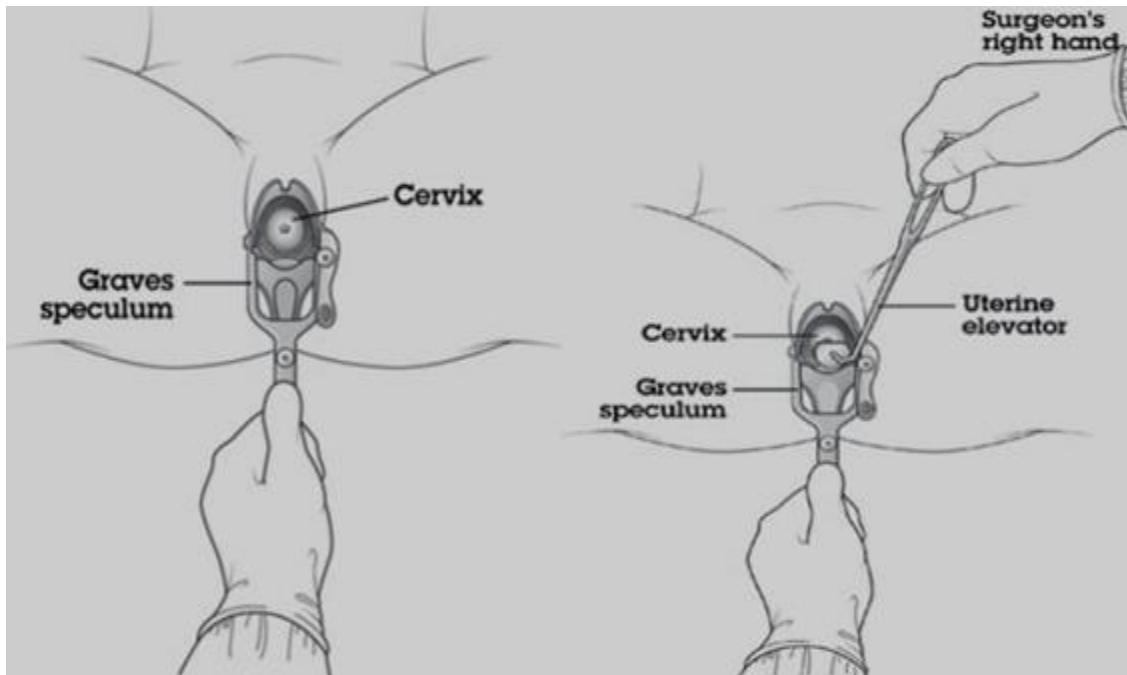
Inserting the Uterine Elevator is required only in supra-pubic minilaparotomy for interval or post-abortion tubal ligation, as the tubes are easily accessible in a postpartum uterus. The uterine elevator (**Figure I-3**) helps the surgeon to manipulate the uterus and gain easier access to the fallopian tubes, by bringing the cornual portion of the uterus near the incision site so that each tube can be directly visualized and grasped. The uterine elevator should be inserted by the surgeon and prior to preparing the client's abdomen. The technique used and steps for inserting the uterine elevator are as follows:

- Position the client comfortably on the surgical table in the dorsal lithotomy position.
- Do bimanual digital examination if not done at OPD Level
- Insert the bivalve speculum, preferably Graves vaginal speculum into the vagina to visualize the cervix. use both screws to open the two blades of the Graves speculum, to ensure optimal visualization of the cervix and to help prevent the vaginal walls from coming into contact with the intrauterine portion of the uterine elevator (**Fig. I-7A**).
- Using a sterile forceps to hold an antiseptic-soaked cotton ball or gauze sponge, generously swab the cervix with antiseptic solution (such as iodophor-based Betadine) twice.
- Without touching the vaginal walls, pass the uterine elevator through the vagina and into the cervix, up to the cervical guard (**Fig. I-7B**). Be sure to maintain the sterility of the intrauterine portion of the elevator and in line with the position of the uterus. Aligning the uterine elevator position with the position of uterus, is a critical step to prevent uterine perforation while inserting the elevator
- Remove the speculum, taking care to keep the uterine elevator in place with one hand so it does

not slip out.

Figure 7 b: Inserting the uterine elevator.

A- Using a Graves speculum to visualize the cervix



B-inserting uterine in to anteverted / anteflexed uterus

C- Passing the uterine elevator into the cervix

Surgical cloth and surgical scrub and gloving: The mini laparotomy team should wear appropriate operating theater clothing, including head cover and mask. The surgeon and surgical assistant must both perform a surgical scrub and must wear surgical gowns and surgical glove require sterile gloves on surgically scrubbed hands.

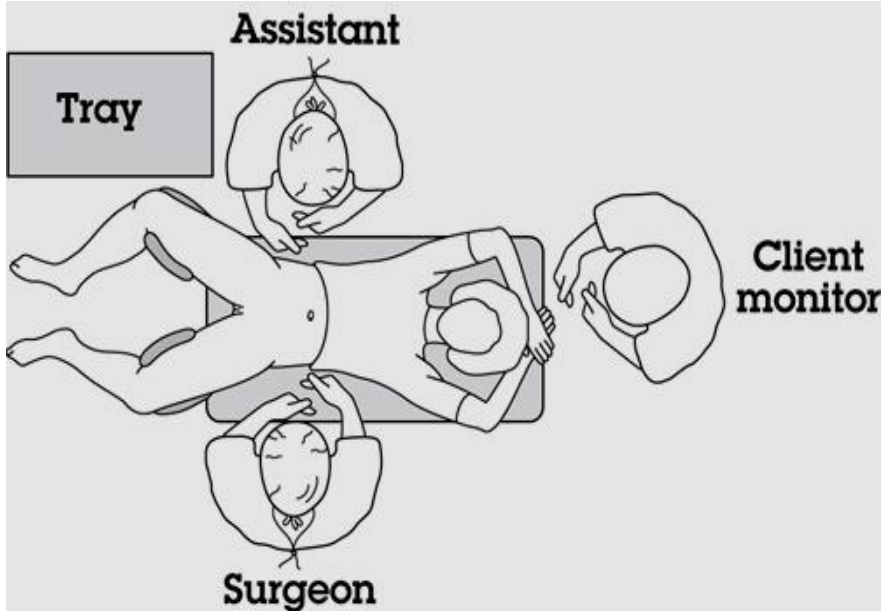
D. Preparing the Client's Abdominal Area:

- Using a sterile swab (a cotton ball or gauze sponge) on a sterile sponge forceps soaked with an iodine solution, wipe the skin, first with strokes at the site of the planned incision line and then with circular motions around the incision line, moving progressively out to the periphery.
 - Do not bring the used swab back over a cleaned area.
 - Upon reaching the periphery of the prepared skin, discard the swab in a waste receptacle.
 - Swabbing should be repeated at least twice.
- For suprapubic procedures, skin preparation should include the upper part of the pubis and thighs.
- After allowing the antiseptic to dry for 2min, create a sterile field by placing sterile drape sheets

(either one fenestrated drape or four drapes) around the immediate operative site.

- Let the surgical team take their appropriate positions (**Figure I-7 below**).

Figure 7C: Positions of the surgical team.



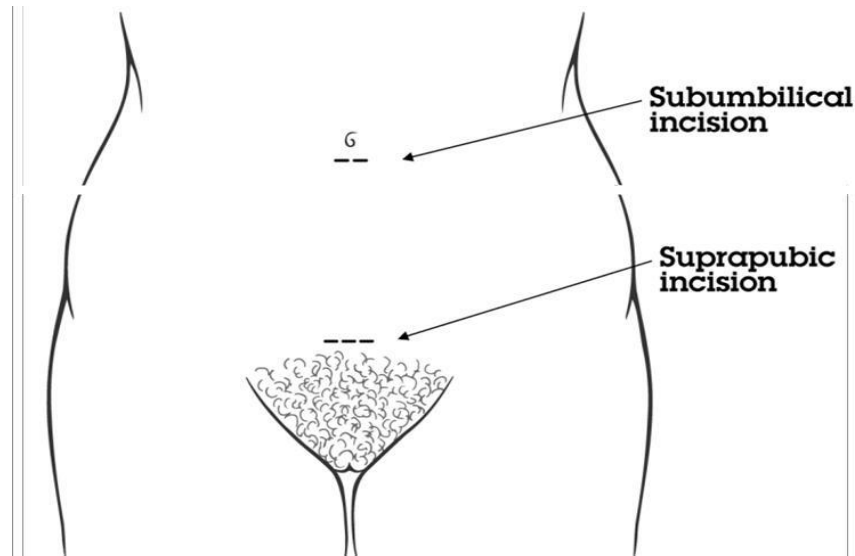
NB: The surgeon on the left side if right-handed and on the Right side if left-handed

Selecting the Incision Site and administering local anesthesia:

Selecting the appropriate incision site ensures that the abdomen is opened in the most optimal area anatomically to access the tubes.

1. ***Supra-pubic mini laparotomy:*** The best area for the suprapubic incision is 2 to 3 cm above the border of the pubis (**Fig. I-7D**) or 2 cm below the level of the fundus.
2. ***Sub-umbilical Mini laparotomy:*** The best area for the sub umbilical incision is just beneath the umbilicus or 2-3 cm below the fundus, as during the immediate postpartum period the umbilicus is not deep and lies on top of the enlarged postpartum uterine fundus. Additionally, the abdominal wall in this area is thin and flexible.

Figure -7D: Mini-laparotomy incision types (sites).



Using the **diamond-shape** technique administer Lidocaine 1% *without epinephrine*, at a dose of 4.5 mg/kg of body weight as described in the previous section.

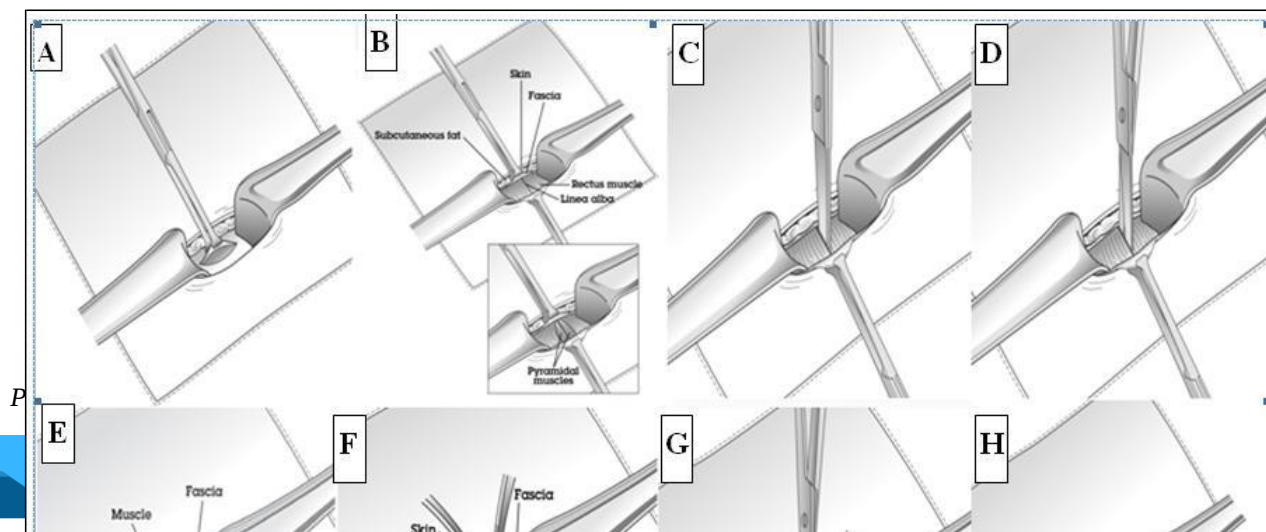
.7.4. Entering the Abdomen:

- Pull the skin stretched to make a transverse incision (a vertical incision is indicated when there is an existing midline scar) approximately 2 to 5 cm long and centered.
- Using a scalpel blade, open an incision only through the epidermis 2 to 3 cm in length (to a maximum of 5 cm). The subcutaneous tissue should not be included in the opening of the incision, as it should be dissected bluntly later.
- Using small blade of the Army navy retractor (always working in the midline), bluntly dissect the subcutaneous fat. Do so gently and precisely, to minimize tissue trauma and bleeding.
- Control bleeding in any vessels, as needed.
- Dissect subcutaneous tissue until the anterior rectus fascia is visualized and exposed.
- Nick the fascia transverse, using a scalpel at the center of the incision; incise the full thickness of the fascia until the rectus muscle can be seen on both sides of the midline.
- With the Allis forceps, grasp the fascia in the midline of the incision at the inferior and superior portion (**Fig. I-9A**). If necessary, free the underlying muscles from the fascia by dissecting it bluntly.

- Extend the fascial opening on both sides so that it is slightly larger than or about the same length as the skin incision.
- Have the surgical assistant place the retractors under the fascia and adjust them to expose the Linea alba (the midline raphe of the rectus muscle) (**Fig. I-7B**). Retractors should be pulled horizontally to keep the incision open. At this time, To have adequate opening better to remove both Allis forceps.
- Bluntly separate the rectus muscles vertically at the linea alba, entering through the linea alba with a closed scissors or a hemostat (**Fig. I-7C**).
- Once through the Linea alba, open the scissors to enlarge the opening (**Fig. I-7D**).
After the rectus muscles are separated, have the surgical assistant reposition the retractors further into the incision, to separate the rectus muscles even more and expose the preperitoneal fat (**Fig. I-7E**).
- Bluntly dissect the preperitoneal fat as needed to expose the peritoneum.
- To incise the peritoneum, elevate the peritoneum by grasping it at two points with hemostats (**Fig. I-7F**). To prevent injury to underlying structures, avoid using toothed instruments.
- Once the peritoneum has been elevated with two forceps turn by turn (grasp -release, release-grasp two to three times)
, to protect the underlying viscera and structures from injury, check that the bowels, bladder, or omentum have not been grasped inadvertently (**look for translucency of the peritoneum**) and make a small opening in the peritoneum with a scissors or hemostat (**Fig. I-7G**).
- Once the peritoneum is open and entry into the abdominal cavity is confirmed, the surgical assistant should gently reposition the retractors inside the abdomen to maximally expose pelvic structures. The best position for the retractors is in the same direction as the incision—transversely.

From this point until the completion of tubal ligation, the surgical assistant must keep the incision open with retractors and must adjust the retractors according to the surgeon's needs.

Figure I-7E: Entering the abdomen.



Accessing and Delivering the Fallopian Tubes:

Accessing and delivering the fallopian tubes requires manipulation of the uterus and the fallopian tubes. The uterine elevator is the key instrument for moving the uterus and consequently for positioning the fallopian tubes near the incision area, which allows the surgeon to access them. The process of manipulating the uterine elevator with one hand and accessing and delivering the tubes with the other requires coordination.

- To shift the bowel and omentum cephalic, the operating table should be placed in the Trendelenburg position (with the head of the table tilted downward at 20° or less). This position shifts the bowels out of the operative site. If client placed in this position with deep breath, ahead of opening peritoneum, it may play its role to minimize the risk of injuring the visceral organs.

- **Clear a path to see the uterus and tubes.** Visualization of the uterus and tubes may be obscured by the momentum or bowels. If this is the case, ask the client to take a deep breath while you push the bowels gently out of the way with the baby Babcock forceps and manipulate the uterus with the uterine elevator, as described in the following steps.
- **Gently press the handle of the uterine elevator downward** and (in the direction of the floor) with one hand...as if using the uterine elevator as a fulcrum to lift up the uterine fundus; this will **bring the uterine fundus upward** toward the incision site and closer to the abdominal wall. N.B. Simple downward may work only for some (where perineum strong-otherwise second finger should act as a center of fulcrum)
- Since the fallopian tubes have a peritoneal layer that contains nerve endings, clients often feel pain when the tubes are grasped. To prevent pain, **drop 1 to 2 cc of 1% lidocaine without epinephrine** on each fallopian tube through the incision, which the surgical assistant is holding open with retractors.
- Then wait 30 to 60 seconds for the anesthetic to take effect.
- **While directly viewing the uterine fundus, gently rotate the handle of the uterine elevator** in the opposite direction of the tube being accessed, to position the tube at the incision site. Pass the tubal hook behind the fundus to make the tube visible and grasp the tube with baby Babcock forceps. As a result of this maneuver, the tube should become visible and can then be grasped. Second baby Babcock forceps may be used to gently follow the tube to expose its fimbriated end.

7.5. Ligating the Fallopian Tubes using the Modified Pomeroy technique using the

modified

The modified Pomeroy technique is the most commonly used, effective and safe method for occluding the fallopian tubes. It is easy to learn, and requires only suture material. This tubal occlusion technique follows the same steps for suprapubic and sub umbilical mini laparotomy. The basic concept of the technique is:

- With a baby Babcock forceps, grasp and elevate at least a 2-cm loop of fallopian tube at its midsection (the isthmic portion), approximately 2 to 3 cm from the cornual portion of the tube. Position the baby Babcock forceps over an avascular portion of the mesosalpinx.
- Keeping the forceps in a vertical position, hold the tubal loop.
HINT: It is important that the tubal loop is large enough so that at least 1 cm of the tube can be excised but enough of the margin of the tube remains that it does not slip out of the suture.
- **Transfixing the suture.** Using a surgical dissecting forceps, hold the tube by its distal side and pass a needle with absorbable suture (Number 0) through the avascular section of the mesosalpinx, taking care to avoid blood vessels.
- Place an **anchor tie** around the proximal side of the loop of fallopian tube. Tie the same suture on **the other side of the looped tube**, using a square knot.
- **Cutting the tube.** After tying the loop of the fallopian tube, use a hemostat to hold the suture knot. While holding the knot, cut off 1 cm of the loop of fallopian tube above the knot, using the Metzenbaum scissors, leaving at least a 0.5-cm tubal stump above the knot. Cut the proximal side first and then the distal side. Examine the stump for bleeding. Undue traction of the tube should be avoided to minimize pain and slippage of the tube end from the tie.
- **Cutting the suture.** After examining the cut tubal stump to ensure that hemostasis has been achieved, cut the suture above the knot and allow the tube to return into the abdomen by releasing the hemostat.
- **At this point, access and deliver the second fallopian tube**, repeat the above steps on the other side to occlude the other fallopian tube.
- After both fallopian tubes have been occluded, have the client monitor or the circulating nurse return the table to its initial horizontal position (if the Trendelenburg position was used).

7.6. Closing the Abdomen:

- Pre closing the abdomen, visually explore the surgical area to exclude the possibility of any uncontrolled bleeding.
- Two layers of the abdomen must be closed: the fascia and the skin. *Peritoneal closure is not necessary*, as data have shown that the peritoneum heals by itself in 24 to 48 hours, without adhesions (Janschek et al., 2003).

- While grasping both sides of the fascia, starting at one end of the incision, close the fascia using a continuous (running stitches) suture with absorbable suture Number 0. Observe for bleeding and control if any.
- Close the skin with interrupted stitches, using either absorbable or non-absorbable suture Number 0. The skin can be closed with stitches about 1 cm apart, depending on the need to control bleeding.
NOTE: If non absorbable suture is used to close the skin, make sure that the client has access to a facility where the suture can be removed.
- Finally, dress the closed incision Pre removing gloves, gowns, and drapes.

7.7. Post procedure Tasks:

Once the closed incision is dressed, the surgical team should make sure that the client is feeling well and is calm, remove the client's abdominal drapes and finally remove the uterine elevator (if this was a suprapubic procedure).

- Help the client off the table and escort her to the recovery room, where she must be monitored regularly until she is discharged. Offer soft drinks and sweets immediately.

Infection prevention measures:

- Remove all sharps (needles and scalpels) from the surgical tray.
- Place *disposable* sharps in puncture-proof containers to be incinerated or buried.
- Place used instruments in a 0.5% chlorine solution for 10 minutes for decontamination.
- Dispose of waste materials in accordance with standard infection prevention procedures.
- Wipe any potentially contaminated surfaces with a 0.5% chlorine solution.



Activity 7:C Video show: procedure of TL

Instruction Show the prepared video and allowed the participants to reflect on the show

Time allowed 20 min



Activity 7:D Guided clinical practice

Practice the TL procedure as an assistant and then as a surgeon with your supervisor (do all the tasks: Counseling, Pre procedure assessment, surgery, and POP/after procedure task)

Time allowed 6 hrs.(Depending on client availability)

Select and appoint cases prior of the training schedule and use as a reference as in service training.

Special arrangement is considered till the trainees should perform a solo procedure of minimum five for each TL and vasectomy

Chapter 8: Post procedure/Care and follow up for TL/ML/LA

Time allowed 60 min

Chapter description;

This chapter is intended to equip participants with knowledge on Post procedure/Care and follow up

Primary objectives

At the end of this chapter participants will be able to

- Discuss post procedure care

Enabling Objectives:

At the end of this section, you will be able to:

- Describe the post TL recovery, client instruction and discharge procedures for clients following TL under LA
- Apply routine follow-up care for clients following a TL by ML procedure.

Out line

- 8.1 Introduction
- 8.2 Post TL by ML recovery, client instruction and discharge procedures
- 8.3 Post-procedure follow-up and management
- 8.4 Summary

8.1. Post-procedure client recovery, instruction and discharge procedures:



Activity 8 A Group Discussion: **post-procedure client recovery, instruction, and discharge procedures** them open Handout I-7A

Divide the group into 3 smaller working groups and asks

Questions

1. What are the tasks that need to be done during post recovery?
2. What are the signs of complications that can be observed during the recovery period?
3. What are the signs that indicate that the client can be discharged?
4. “What instructions should be given to the client following the procedure?”
 - Remind them that the instructions should also include the warning signs for which the client needs to return to a health facility. Correct/clarify participant responses by briefly

reviewing Handout I-7B.

- Tell participants that written instructions should be provided to the client as part of the discharge procedures.
- Ask participants if they have any questions and provide clarification

Time 20 min

Client monitoring consists of observing and recording the client's vital signs (respiratory rate, pulse, and blood pressure), checking her general conditions and comfort, and observing her surgical drape/bed sheet to promptly identify any bleeding.

- The client should be monitored every 15 minutes for at least the first hour after surgery.
- If the client is not awake, monitoring should continue every 15 minutes until fully awake.
- Check vital signs every 15 minutes (blood pressure, respirations, pulse) the first hour; every 30 minutes for the second hours; every 60 minutes for the next two hours.
- Assess client's emotional well-being and comfort level.
- Inspect the dressing for bleeding; if postpartum, check for uterine and sanitary pads for amount of bleeding.
- Confirm the client's readiness for discharge by the doctor or her/his designate.
- Clients should be monitored for at least two hours Pre discharge.
- If possible, or available, give the client sweetened liquids (i.e., tea or juice) to raise her blood sugar level, as she may have fasted for several hours prior to surgery.

The client may be discharged when she is able to retain oral fluids, urinate, converse, dress herself, and walk around. This usually occurs within two hours; however, if a sedative has been used, this time frame will vary, according to the type of sedative used and dosage given.

The person responsible for monitoring the client performs a very important function, because it is during this period that the effects of surgical trauma or another postoperative/after procedure complication is first noticed.

- Inability to urinate.
- Inability to ambulate.
- Signs of hypovolemia and hypoglycemia
- Shoulder pain or abdominal distension indicating intra- abdominal bleeding.
- Delayed recovery from surgery or sedation, preventing the client from travelling safely to her home.

8.2. Post-procedure client instruction

After the procedure the woman should:

- Avoid strenuous exercise for one day and avoid heavy lifting for one week to allow the incision to heal. Resume normal activities as she gradually becomes more comfortable.
- Keep the incision clean and dry for 2 or 3 days.
- Be careful not to rub or irritate the incision for 1 week
- Take 1 or 2 tablets of paracetamol or another safe pain reliever, at 4-6 hour intervals, as needed. Stronger pain reliever is rarely needed. She should not take aspirin or ibuprofen, which slow blood clotting.
- Tell her that she can resume sexual interaction as soon as she is comfortable.
- Bathe 48 hours after surgery but avoid putting tension on the incision.
- Dry the incision site gently after bathing.
- Give a follow-up appointment one week after the procedure to assess healing in the nearby facility.

Remind the client to return to the facility immediately in the presence of warning signs:

- Fever
- Dizziness with fainting,
- Abdominal pain or cramping that is persistent or increasing; heat, swelling, redness of

- the wound noticed or becoming worse,
- Diarrhea, or persistent vomiting
- Bleeding or pus coming from the incision,
- Suspicion of pregnancy—you must be seen immediately.

8.3. Post-procedure follow-up management



Activity 8:C : Individual reflection

1. When should be the follow up visit after TL ?
 2. What are the purposes?
 3. What are the routine tasks that should be done during a follow-up visit?
- 5 minutes

Routine follow-up visits are usually scheduled one week after the procedure:

The purpose of the visit is:

- To assess whether the client has experienced any postoperative/after procedure complications,
- To examine the operative site and to remove stitches (if non-absorbable sutures were used)
- To get client feedback on the procedure. Ask the client questions such as:
- How did you feel about having the procedure while you were awake?
- Were you satisfied with the care you got?
- What part of the care was most helpful to you during the procedure?
- What part of the procedure was most difficult for you?
- Was there any aspect of the care that you received that distressed you?
- Do you have any suggestions for how we could improve the service?

Tasks to Complete at Follow-up Visit

- Take history as outlined above.
- Check vital signs (temperature, pulse, blood pressure).
- Inspect surgical site for healing.
- Remove stitches.
- Counsel client regarding her need to protect herself from STIs, including HIV, if her circumstances indicate.
- Encourage the client to return to facility immediately if she misses a menstrual period or has any concern or question.
- Encourage the client to ask questions and give clear and simple answers.



8.4 Summary

Adhered to standard client monitoring, instruction with its implementation by the client can potentially prevent and timely manage any complications that arise post procedure

Knowing the warning sign and remind the client to return to the facility immediately is critical to avoid the impact of complications

Chapter Nine: complications of tubal ligation prevention and management

Time allowed 120 min

Chapter description:

This chapter is designed to equip the trainees with the knowledge, skills and attitude on complications of tubal ligation prevention and management

Primary Objectives

At the end of this chapter participants will be able to

- Discuss complications of tubal ligation prevention and management

Enabling objectives

At the end of this Chapter participant will be able to:

- Identify complications of TL.
- Describe possible causes of complications
- Explain ways of Preventive measures of complications of TL
- Manage complications of TL.

Chapter outline 2hrs

9.1 Complications of TL

9.2 Prevention of complications

9.3 Management of complication

9.4 Summary

9.1. Complications

Think



Pair



Share



Activity :9: A THINK PAIR SHARE

Question

- What are the common complications associated with TL?
- What is the preventive measure should take to prevent
- complications?

Time allowed is 10 min

Complications are abnormal conditions caused by the procedure that require intervention or management beyond that which is usually provided during post procedure care. The following are complications associated with tubal ligation and their management:

.9.1.1. Anesthesia Related Complications

- Respiratory depression or arrest

- Cardiovascular changes, including arrhythmia, hypotension, hypertension, and cardiac arrest
- Convulsions
- Aspiration of vomits

9.1.2. Signs of anesthesia-related complications:

- Decreased breathing rate
- Short, shallow, quick breathing
- Dyspnea, gasping, laryngeal stridor
- Peri buccal cyanosis (blueness around the mouth) and Central cyanosis ,due to methemoglobin formation secondary to lidocaine complication
- Cyanotic nail beds (bluish fingernail beds)
- Irregular or rapid pulse
- Central nervous system changes (restlessness, anxiety, disorientation)
- Convulsions or loss of consciousness
- Cardiac arrest (absence of pulse, heart sounds, respiration, reflexes, and muscle tone)

9.1.3. Causes of anesthesia related complications

- Overdose of the analgesic
- Overdose of the sedative or tranquilizer
- Combined effect of the drugs
- Delayed effect (drugs reaching their peak of effectiveness after monitoring has been relaxed)
- Intravascular injection of lignocaine
- Overdose of lignocaine (which may be a result of improper infiltration techniques or use of a 2% solution)
- Preexisting cardiac disease
- Severe blood loss with intravascular volume depletion

What might health care staff do, or fail to do, that can worsen the complication?

- Staff fails to recognize signs of an overdose
- Monitoring staff are distracted by other duties
- Staff lacks knowledge of emergency measures (including ventilation, resuscitation, and oxygenation).
- Emergency equipment is unavailable or nonfunctioning
- Staff lack training in the use of emergency equipment
- Antidotes (naloxone, physostigmine, flumazenil) are not available

Sr No	Complication	Ways of Prevention measures	
1	Anesthesia Complications	Verify strength, dose and route of administration	
		Check to avoid Intravascular injection of lidocaine injection	
2	Bladder Injury	Tell the client to void immediate before entering to the procedure room.	
		Check and ensure bladder is empty, if urine suspected insert urinary catheter	
		Carefully locate the incision site two fingers above the pubic hair line	
		Check peritoneum fold for translucent before while entering the abdomen	
		Refer client with previous scar and adhered uterus	
3	Bowel injury	Title head down before attempting to open peritoneum and ask the client to deep breath	
		Verify the translucency of peritoneum or no visceral organ under grasped tissue fold before attempting to cut	
		Don't rush to open, or be patient and check two to three times to verify that no visceral organ under the grasped peritoneum	
		Don't do Quick and deep entry through the thin abdominal wall at the umbilicus during postpartum procedures	
		Don't use tooth instruments with in abdominal cavity	
4	Uterine Perforatio	Confirm the position of uterus and be sure uterine elevator insertion steps follow the uterine position.	
		Be gentle while manipulating the uterine elevator –don't be rough to manipulate the uterine elevator	
5	Bleeding	Secure hemostasis at every steps (skin, fascia, peritoneum, and tubes)	
		Gentle manipulation of uterine elevator	
6	Infection	Use aseptic technique and universal precaution strictly	
7	Pregnancy after Laparotomy	Confirm and verify that the client is unknowingly pregnant before performing the procedure	
		Failure to detect pregnancy in the history or physical exam	
		Confirm ahead that the procedure is not performed during the postovulatory (luteal) phase of the menstrual cycle	
		Avoid using non-absorbable ligature on the tubes-avoiding formation of a fistula in the tubal wall.	
		Use sensitive early pregnancy tests	
		Be sure both tubes are ligated or confirm other structure are nor ligated	
		Spontaneous recanalization of a tube	
		Always, identity and verify the tubes by observing fimbria before ligating -ligating correct structure	

- Staff lack training in the use of emergency drugs
- Staff are unclear about their roles and responsibilities for taking action when the doctor/responsible person is absent or Present he/she arrives

9.2. Prevention mechanism

Preventing the occurrence of complications is the first and most important measure to follow. It is for this reason that appropriate assessment of the client's physical condition is so critical, as is the need to follow updated and sound service- provision protocols. These include not only guidelines for service implementation, but also guidelines for emergency preparedness and management.

Prevention of complication associated with tubal ligation

Pre procedure thorough clinical assessment is the first and most important part of prevention to identify predisposing factors

Table 1.9 show management of complication

9.2. Management of Complication



Activity 1:9:C Group Activity

open Handout I-8B and do the following questions

Question

Identify causes, preventive mechanisms and ways of management for: -

Q1. Respiratory depression cardiovascular complications and Bladder injury

Q2. Uterine Perforation and Bowel Injury

Q3. Wound Infection and Pregnancy after Minilaparotomy

Time allowed is 50 min

- **Treatment and management of respiratory depression:**
 - Follow “ABC” procedures, supplemented by naloxone
 - **Airway:** Keep the airway open
 - **Breathing:** Oxygenate the client using manual resuscitation equipment
 - **Circulation:** Check the circulation by monitoring pulse, blood pressure, and respiration
 - Administer naloxone according to the standard pharmacology guides.

Emergency measures for cardiovascular complications:

- If a cardiac arrest is confirmed, give an immediate pericardial thump and begin external cardiac massage.
- In case of respiratory arrest, give oxygen through bag and mask (or may use mouth-to-mouth resuscitation, if bag and mask are not available).
- Start an IV and administer resuscitative drugs as appropriate and as indicated.

Drugs used to treat anesthesia-related complications:

- **For drug overdose:**
 - For narcotic antidote (naloxone) Initial **IV** 0.04 to 2 mg; may repeat with escalating doses every 2 to 3 minutes, as needed
 - For benzodiazepine antidote (physostigmine or flumazenil)
 - Flumazenil initial dose is 0.2 mg IV given by slow push over one to two minutes)
 - Physostigmine **IM, IV**: Initial: 0.5 to 2 mg; may repeat every 10 to 30 minutes until response occurs

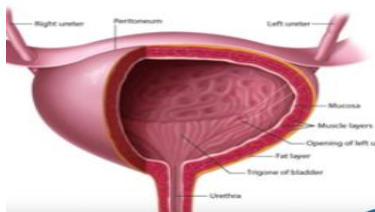
For cardiac and respiratory arrest

- **Lidocaine IV**: 1 to 1.5 mg/kg; repeat with 0.5 to 0.75 mg/kg every 5 to 10 minutes as necessary
- **Adrenaline IV**, 1 mg (using the **0.1 mg/mL** solution) every 3 to 5 minutes
- **Sodium bicarbonate IV**: 1 mEq/kg/dose once
- **Calcium chloride IV**,: 500 to 1,000 mg as a rapid bolus; may repeat as necessary

- Bladder Injury

Intra procedure signs of bladder injury:

- Clear fluid welling up into the incision
- Sight of the rugal folds of the bladder interior



Post procedure signs of bladder injury:

- Haematuria
- Suprapubic pain
- Feel or signs of infection

Contributing factors:

- Failure to ensure bladder was emptied Pre surgery
- Inappropriate location of the incision
- Failure to look for translucence of the fold Pre opening the peritoneum

Treatment of bladder injury:

- If bladder injury is suspected, instill a sterile solution into the bladder through a urethral catheter. Methylene blue, gentian violet, sterile water, or IV solution may be used.
- Repair the injury using continuous suture of fine catgut with an atraumatic needle in two layers. Continue the tubal occlusion procedure if the injury is minor.
- Insert an indwelling (Foley) catheter, attached to a drainage bag keep it 7-14 days depending on extent of injury and repair.
- Initiate a course of antibiotics.
- Hospitalize if the injury is extensive.
- After removing the catheter monitor for ability to void.

9.3.1. Bowel Injury

Intra procedure signs of bowel injury:

- Visualization of bowel serosa or muscularis
- Visualization of bowel contents

Post procedure signs of bowel injury:

- Abdominal pain
- Vomiting
- Failure to pass gas
- Acute illness
- Fever with rapid pulse (early)
- Temperature returns to normal or subnormal (later)
- Abdominal dissension
- Abdominal tenderness

Causes or contributing factors:

- Failure to feel a fold of peritoneum to ensure bowel is not adherent Pre opening
- Failure to look for translucence of the fold Preopening the peritoneum
- Quick and deep entry through the thin abdominal wall at the umbilicus during postpartum procedures
- Use of a toothed instrument within the abdominal cavity

NB: Avoiding this risk factors and taking maximum precaution at the steps specified above will

enable you to avoid these complications.

Treatment of bowel injury:

- Promptly repair the defect with fine silk suture in multiple layers using a traumatic needle.
- If the injury is superficial (serosa layer only), approximate the torn margin, complete the tubal occlusion.
- Allow the client to rest an extra hour in recovery, then discharge with instructions to return immediately if pain or fever begins.
- Make arrangements for follow-up of the client in order to monitor any change in condition over the next 48 hours.
- If the injury is through to the bowel lumen, initiate IV antibiotics and hospitalize the client for observation following the repair.
- If fecal matter is expelled into the abdomen, suction and lavage the peritoneal cavity with sterile solution (for example, normal saline). Discontinue tubal occlusion if it has not already been started.

9.3.2. Uterine Perforation

Signs of uterine perforation:

- Tip of elevator seen protruding through the uterus
- Inability to elevate the uterus against the abdominal wall
- Superficial palpation of the tip of the elevator through the abdominal wall
- Metallic sound of the tip of the elevator against the abdominal retractors
- Bleeding

Contributing factors:

- Improper insertion of the uterine elevator
- Rough manipulation of the uterine elevator

Treatment of fundal uterine perforation:

- If the uterus is anteverted, consider leaving the elevator in place while the tubes are occluded, using extreme gentleness if the uterus is manipulated.
- If the uterus is retroverted, consider repositioning the elevator, rotating the uterus to an anteverted position, and then occluding the tubes.
- After the tubes are occluded, remove the elevator, and observe for bleeding (Usually only a slight oozing) from the perforation site.
- If fresh bleeding continues, control it with a mattress suture, using catgut.

Observe the client for an extra 1 to 2 hours

- Initiate a complete course of antibiotics.
- Consider hospitalization if continuous bleeding is suspected or if posterior perforation with vessel injury occurring.

9.3.3. Pregnancy after Mini laparotomy

Despite pregnancy is rare after tubal ligation there is a rare chance of being pregnant after the procedure.

Signs of pregnancy

- Missing menstrual periods
- Nausea and vomiting
- Change in breast and other signs of pregnancy

Intra uterine pregnancy management after TL

- Counsel the client if she wants to continue the pregnancy or not and manage accordingly

Ectopic pregnancy:

If the pregnancy occurs after tubal ligation there is significantly high chance of being an ectopic

Signs of ectopic pregnancy

- Sudden intense pain, persistent pain, or cramping in the lower abdomen, which may or may not be localized to one side; referred shoulder pain
- Irregular bleeding or spotting with abdominal pain after a missed or abnormally light menstrual period
- Fainting or dizziness that persists for more than a few seconds (which could indicate internal bleeding)

Factors related to pregnancy after mini laparotomy:

- Client unknowingly pregnant before or at the time of surgery
- Failure to detect pregnancy in the history or physical exam
- Surgery performed during the post ovulatory (luteal) phase of the menstrual cycle
- Unavailability of sensitive early pregnancy tests
- Failure to occlude one or both tubes
- Spontaneous recanalization of a tube
- Use of nonabsorbable ligature on the tubes
- Formation of a fistula in the tubal wall
- Failure to identify the correct structure to occlude
- Failure to certify the identity of the tube by observing fimbria
- Ligation to the wrong portion of the tube

Management of pregnancy after mini laparotomy:

- Counsel the client regarding her condition and options; termination of pregnancy is based on the technical and procedural guideline of safe abortion and will depend upon their decision.
- Estimate the date of conception. If the pregnancy is intrauterine and occurred Pre the sterilization procedure was performed, inform the client that the sterilization procedure will not affect the pregnancy and that tubal occlusion does not need to be repeated. If the pregnancy occurred after the bilateral tubal ligation surgery, offer a repeat procedure following resolution of the pregnancy.
- If the pregnancy is intrauterine and will be continued, arrange routine prenatal care.
- If the pregnancy is ectopic, arrange for immediate surgery.
- If the pregnancy occurred after tubal ligation procedure/surgery, examine the fallopian tubes to try to establish the reason for the pregnancy.

- Analyze the frequency of pregnancies after mini laparotomy at the facility. If pregnancy occurs in more than 1% cases, consider changes in techniques and procedures, as indicated by the analyses.

9.3.4.Wound Infection

The signs of infection include:

- Redness at the incision site
- Pus at the incision site
- Client's complaint of pain worsening
- Hotness at the incision site

Contributing factors

- Breaches in infection prevention practices.

Management of wound infection

- Inspect the site.
- Clean the site with soap and water or antiseptic solution.
- Give oral antibiotics for 7-10 days.
- Give a follow-up visit for 1 week after beginning treatment.

B. Emergency management preparedness for complications of mini laparotomy

Facilities that provide mini laparotomy services must be able to manage minor complications on-site and must have the capability to transfer clients for management of serious complications. For more serious complications that the site cannot manage, the client should be stabilized and promptly referred. In short, *emergency management preparedness is a vital and absolutely necessary component of mini laparotomy for female sterilization (tubal ligation) services.* This includes:

- *The ability to recognize and manage early warning signs and complications.* All who provide direct client care and all operating theater personnel should be able to recognize cardio respiratory distress and resuscitate the client.
- *Client monitoring for early recognition of complications.* Client monitoring must be routine and complete because such monitoring facilitates the early recognition of complications, through early observation of changes in the client's vital signs and responsiveness.
- *Availability of functional equipment, adequate supplies, and appropriate drugs.*
Regardless of the type of anesthesia used, emergency drugs and equipment for treating a sedative overdose or any other reactions (e.g., vasovagal reaction, or fainting) *must* be available. These need to be near at hand both in the surgical area and in the recovery area.
- *Transfer capability and a back-up referral facility.* After stabilization, for complications that

need further treatment, staff must be prepared to be able to transfer a client to a facility capable of managing serious complications.

Note: All procedure related complications should be documented and reported.



9.4 Summary

Emergency management preparedness for complications of mini laparotomy is vital

Prevention and early detection of complications are very important

Case specific management, establishing including referral system is curtail

Chapter Ten: OVERVIEW OF VASECTOMY

Time allowed 50 minutes

Chapter description-

This chapter covers the characteristics of vasectomy, including facility requirements and essential procedural knowledge. It addresses method-specific counseling

Primary Objectives:

By the end of this chapter participants will be able to:

- Describe the characteristics of Vasectomy

Enabling Objectives:

At the end of this section participants will be able to:

- Explain vasectomy and its effectiveness, safety, mechanism of action, indication, precautions
- characteristics, and timing of vasectomy
- Describe the vas occlusion using vasectomy technique.

Chapter outline

10.1 Introduction

10.2 Definition, mechanism of action, effectiveness and safety

10.3 Characteristics and timing of vasectomy

10.4 The vas occlusion techniques using vasectomy

10.5 Summary

10.1. Introduction



Activity 2.1: B Individual reflection

Instruction: Ask participants to reflect on the following question.

What is vasectomy and its characteristics?

5 minutes

Vasectomy is the technique of interruption of the vas deferens with an intention to provide permanent contraception by ligation and cutting (blocking) the passage of sperm produced by the testes. The procedure is usually performed under local anesthesia. The traditional method involves making one or two incisions in the scrotal skin to expose each vas deferens. Each vas deferens is then ligated and divided using various techniques.

The method involves a safe, simple, and short surgical procedure performed on the scrotum under local anesthesia. Through a puncture on the scrotum, the provider locates each of the tubes that carry the

sperm—also called the vas deferens—and divides and blocks it by tying it closed keeping sperm out of semen. Because the procedure is permanent, it cannot be reversed.

The procedure requires a trained provider and should be done in the right settings within a health facility or clinic or other settings with the necessary equipment and supplies, to ensure quality of care.

Vasectomy is a simple procedure that can be performed as an outpatient and usually takes less than 20 minutes to perform. When carried out under local anesthesia and using a strict aseptic technique, it involves very little risk of morbidity and negligible risk of mortality. The procedure is not immediately effective and another method of family planning/contraception should be provided until 3 months post-surgery/after procedure or until simple wet mount of semen at 12 weeks post-surgery/after procedure reveals azoospermia.

N.B. Vasectomy is much simpler technique than Tubal ligation.

Mechanism of action

The vas deferens through which sperms travel from the testes to the seminal vesicle and then urethra (See Figure II-1) are Tie and cut so that sperm can no longer enter the semen that is ejaculated.

Effectiveness

Vasectomy is one of the most effective methods which carry small risk of failure, among the partners of men who have vasectomies, far less than 1 in every 100 will become pregnant in the first year of use. In fact, less than 1 to 2 women in every 1,000 will become pregnant.

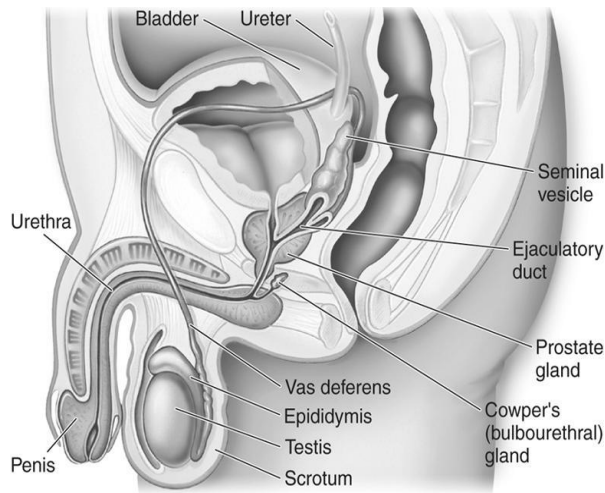
Men can have their semen examined at 3 months after the procedure to see if it still contains sperm.

- Vasectomy does not affect the sex drive or performance of the man. It is not castration. The man also still ejaculates in the same way he did Pre the procedure, and vasectomy does not make the man feminine.
- Vasectomy is not effective in the first three month when the couple should choose and use another reliable method of family planning
- Vasectomy does not protect against any sexually transmitted infections (STIs) or HIV. For protection against HIV or STI, condoms should be used.

A man can have his semen checked to be sure that the vasectomy is effective. He can do this at any time after 3 months or 20 ejaculations???(FSRH-2024)

following the procedure. If no sperm are found in his semen on simple wet mount, he can be sure that his vasectomy is working effectively.

Figure II-1: Male reproductive anatomy.



Safety

Vasectomy is safe if it performed, with good preparation, good /Pre procedure / preoperative assessment and using a strict aseptic technique.

10.2. Characteristics of Vasectomy

- Vasectomy is one of the most effective contraceptive methods, with a failure rate of less than 1%.
- Vasectomy is meant to be permanent.
- Vasectomy can be performed at any time
- Vasectomy is simple and safe.
- Vasectomy can be performed quickly.
- Does not protect against STI including HIV/AIDS.
- Vasectomy is a minor surgical procedure. It should be provided by a trained provider, under aseptic conditions, and with medications and clinical assistance.
- Some men have a little pain, soreness, bruising, or swelling after vasectomy.
- These problems usually go away by themselves or with simple treatment or analgesics.
- Requires minor surgery, which is to be provided by a specifically trained provider, under aseptic conditions, and with medications and clinical assistance.
- Is not immediately effective; couples must choose and use another contraceptive method for the first 3 months

10.3. Surgical approaches to vasectomy

Surgical approaches to vasectomy

There are two surgical approaches to vasectomy: -

- i. Incisional/ conventional/ traditional vasectomy and
- ii. No-scalpel vasectomy (vasectomy)

There are more similarities than differences between them. For example, client counseling, Pre procedure/pre-vasectomy assessment, vas occlusion, after procedure/post-vasectomy care, and management of complications are the same in both techniques. The differences between the two techniques are few but significant.

Major Differences between NSV and Conventional Vasectomy: -

conventional (incisional) approach utilizes:

- Scalpel and Allis or towel clamp are used for entry.
- The vas is located, identified and firmly anchored Pre injecting anesthetic and making the incision.
- For anesthetizing local anesthesia is infiltrated at the site of entry (incision); may involve several punctures.
- One midline incision should be less than 10 mm or two small incisions (one on each side) in the scrotum.
- A loose technique of holding the vas resulting in occasional slipping with subsequent need to retrieve the vas through the incision, thus adding to surgical trauma.
- The scrotal skin incision needs to be sutured at the end of the procedure.

No-scalpel approach utilizes:

- With vasectomy, two specialized instruments—a ringed clamp and a dissecting forceps (a sharp, curved hemostat)—are used for entry instead of a scalpel.
- One midline puncture is made for entry.
- Three finger technique is used for isolating the vas from surrounding vessels in the vas sheath.
- The vasectomy technique uses a vasal nerve block, which is created by first injecting anesthesia to the scrotal skin and then making a deep injection of anesthetic alongside each vas.
- This provides better anesthesia than simply anesthetizing the skin around the entry point.
- A sharp dissecting forceps is used to make a puncture entry into the scrotum and to bluntly dissect the tissues.
- A special ring clamp securely anchors the vas directly under the scrotal skin and then grasps the bare vas so that it can be occluded.
- Because the scrotal skin puncture with the dissecting forceps is so small, sutures are not needed.

	Incisional vasectomy	No scalpel vasectomy
Instruments used S entry	Scalpel	Ringed clamp Dissecting forceps
Anesthetic method	Localized injection	Pelvic block
Entry technique	Scalpel incision	Skin puncture Blunt dissection
Skin closure	Suture	No closure methods

10.4. Advantages of vasectomy

Vasectomy offers several advantages over incisional vasectomy

- The primary surgical reason and advantage for using no-scalpel vasectomy is that it is less invasive than the incisional/minimal invasive vasectomy technique.
- Therefore, vasectomy results in fewer hematomas and infections than conventional/incisional vasectomy.
- Men undergoing vasectomy reported less pain during the procedure and early in the follow-up period than did men having an incisional vasectomy and also reported earlier resumption of sexual activity after surgery (Sokal et al., 1999; Holt and Higgins, 1996; Skriver et al, 1997).
- Neither minimal invasive incisional nor no-scalpel vasectomy is time-consuming; however, there are reports of decreased operating time when skilled providers use the no- scalpel approach (American Urology Association of Vasectomy Guideline updated; 2015, British Association of urological Surgeons Vasectomy Update; 2020)
- For example, in the United States, a 40% reduction in operating time has been reported with vasectomy (The British Facility of Sexual and Reproductive Health Care Service Standard for Vasectomy in Sexual Reproductive health Service, 2024

Vas Occlusion Method

The ends of the vas should be occluded by one of three divisional methods. The method of occlusion is not influenced by the surgical approach used. The most widely used method is to isolate/free/ the vas, and ligate both ends with absorbable sutures, remove a small segment. .

1. Mucosal cautery (MC) with fascial interposition (FI) and without ligatures or clips applied on the vas;
2. MC without FI and without ligatures or clips applied on the vas;

Open ended vasectomy leaving the testicular end of the vas not ligated un occluded, using MC on the abdominal end and FI

As an alternative to ligation, cautery with a needle electrode can effectively occlude the ends of the divided vas. Cautery has been shown to be highly effective (Labrecque et al., 2004; Barone et al., 2004) and was found to significantly reduce failures compared with ligation and excision with fascial interposition (Sokal et al., 2004b).

With either occlusion method, the doctor may create a fascial barrier by pulling the sheath over one of the vas ends and suturing it.

The purpose of this step is to reduce the likelihood of the Vas ends spontaneously rejoining. Results of a randomized controlled trial demonstrated that use of fascial interposition with ligation and excision significantly improves the effectiveness of vasectomy—ligation and excision without fascial interposition is no longer recommended (Sokal et al., 2004). After ligation and excision, the surgeon should carefully check for bleeding, Pre putting the ends of the vas deferens back in to the scrotum.



10.5 Summary

Vasectomy is very safe, highly effective permanent method of family planning

There are two surgical approaches to vasectomy

Vasectomy prevent pregnancy by creating discontinuity in vas deferens

It needs Pre-procedure assessment, counseling, trained health professional and aseptic technique

Not effective immediately and back up method needed until effectiveness proved by Post vasectomy semen analysis

CHAPTER Eleven: FACILITIES, VASECTOMY/LA TEAM, EQUIPMENT, INSTRUMENTS and SUPPLIES

Time allowed 30 minutes

Chapter description: This chapter covers equipments and supplies needed for vasectomy procedures

Primary Objects

At the end of this chapter participants will be able to:

- List equipment and supplies needed for vasectomy service

Chapter Objectives:

After completing this Chapter, the participants will be able to discuss facilities requirements for Vasectomy

Chapter out line	
11.1	Facilities (Location of Services) and the vasectomy team
11.2	Equipment, instruments and supplies needed to provide vasectomy services
11.3	Summary

11.1.Facilities (Location of Services) and the vasectomy team

With very little additional investment, vasectomy can be performed on a continuous, year-round basis in nearly all permanent health care facilities (including hospitals, multipurpose health care centers and clinics, specialized family planning clinics, and the treatment rooms of private physicians). Vasectomy can be performed in almost any facility (WHO, 1988). There are a few minimum requirements to providing high-quality services:

- A waiting area with a toilet (The waiting area may also serve as a recovery area.)
- A private space for counseling
- An examination room for the preoperative /Pre procedure / assessment and follow-up examination
- A clean room for surgery, equipped with a comfortable, clean table for the client and a good light source

In most countries, no-scalpel vasectomy, like conventional vasectomy, is an outpatient procedure performed in an office or clinic. Preferably, the temperature of the room should be warm because it affects the cremasteric and the dartos muscles. By relaxing the scrotum, a warm room facilitates the manipulation of the vas by using the three- finger technique.

Vasectomy can be performed by trained general practitioners, specialist surgeons, health officers and other physicians. There is no simple formula for determining the personnel required to staff a vasectomy

service. In clinics with a small caseload, only a nurse and a physician may be needed, since one person can handle several of these functions.

11.2. Equipment, instruments and supplies needed to provide vasectomy services



Activity 2:2: B Reading activity

Read/review list of equipment, instrument and supplies and summarize Chapter II, Table II-1.

10 min.

The no-scalpel technique requires two instruments specially designed by Dr. Li Shunqiang.

1. The extracutaneous ringed forceps is a type of clamp used to fix the vas deferens (*Fig. II-2A*).

For the sake of clarity, the term **ringed clamp** will be used alternatively. Throughout the operation, the surgeon uses the ringed tip of this instrument to encircle and to grasp the vas, without injuring the skin. The clamp grasps the vas both extra cutaneously and directly. This instrument comes in three ring sizes: 3.0 mm, 3.5 mm, and 4.0 mm. These different diameters accommodate different thicknesses of vasa and scrotal skin.

2. The dissecting forceps (*Fig. II-2B*) is similar to a curved mosquito hemostat, except that the tips are sharply pointed. It is used to puncture the scrotal skin, to spread the tissues, to dissect the sheath, and to deliver the vas deferens. The dissecting forceps can also be used to grasp the vas while a ligature or cautery is applied for occlusion. Because the instrument is a modified hemostat, it can be used to control bleeding.

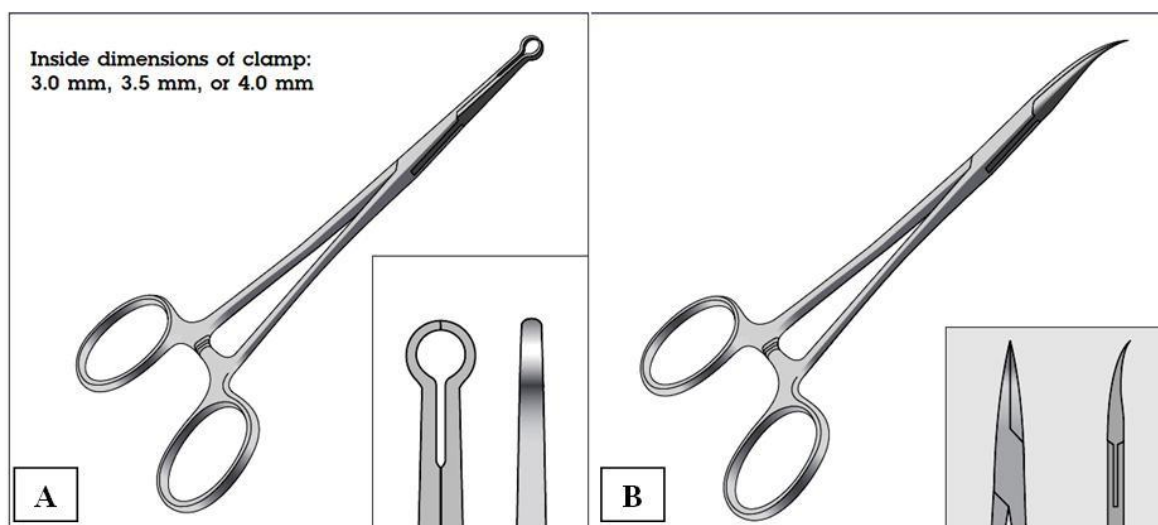


Figure II-2: Instruments

The complete list of instruments and supplies needed for vasectomy / No-scalpel vasectomy are listed in Table II-1 below.

Table II-1: Instruments and supplies needed for no-scalpel vasectomy

Instruments
• Cup (bowl, galipot) • Sponge holding forceps • vasectomy ringed clamp • vasectomy dissecting forceps • Straight scissors
Supplies

- Adhesive tape and gauze for positioning the penis away from the surgical field (secure at 12 O'clock position)
- Scissors for clipping any scrotal hair that would interfere with the procedure
- Soap and water or antiseptic agents for the surgical scrub
- Small sterile towel (for hand drying after surgical scrub)
- Alcohol-based (glycerin containing) hand rub (recommended if plain soap is used for the surgical scrub)
- Sterile gloves
- Iodine antiseptic solution for cleaning the procedure is/ operative area
- 10 ml syringe with 1.5 inch or 27-gauge needle
- Local anesthetic such as lidocaine (without epinephrine, 1%)
- Distilled water to dilute lidocaine (if 2% lidocaine is used)
- Sterile drapes (fenestrated 1X 1.5 meter to cover both the leg area and abdomen fully) absorbable (or chromic catgut) for ligation of vas, number 3/0, 4/0
- Sterile gauze
- Adhesive tape or Band-Aid for dressing the wound
- Scrotal support for the man to wear after the procedure (optional)
- Sterile surgical gowns, caps, masks for both surgeon and assistant
- Client's gown
- Drape to cover surgical cushion table
- Drapes for packing instruments
- Instrument tray, with stands



11.3 Summary

Make sure as you are aware about Vasectomy specific instruments (ringed clamp and dissecting forceps).

Review and remind needed facilities, and all the required equipment, instruments and supplies to initiate Vasectomy services

CHAPTER.TWELVE:METHOD SPECIFIC COUNSELING FOR VASECTOMY

Time: 40minutes

Chapter description:

This chapter covers the method specific counseling for vasectomy and gives adequate insight on how to demonstrate it.

Primary Objectives;

At the end of this chapter participants will be able to:

- Perform method specific counseling for vasectomy

Enabling Objectives

At the end of this Chapter participants will be able to: -

- Conduct appropriate method specific counseling on vasectomy
- Demonstrate adequate knowledge and skill on counseling for vasectomy

Chapter outline

- 12.1 Introduction to general counseling
- 12.2 Method specific counseling for vasectomy
- 12.3 Informed consent
- 12.4 Summary

12.1 Introduction to general counseling



Activity 2.3.A Role play activity
Role play on case specific counseling
Instruction

– Read the following story

Story

Mr X had a vasectomy four months ago, and he returned to the facility saying that his wife is six weeks pregnant. In answer to the counselor's questions, he admits that they had unprotected sex about one month after the vasectomy. He is concerned very much about the health of his wife, whom he loves very much and who has diabetes

The role of the counselor – make sure you do effective rapport building. The

counselor will use counseling tools.

Observe and comment role play, discuss the detail with the steps and the procedures of permanent method specific counseling skill

The observer uses checklist to see if the counselor follows the steps listed under rapport building in the REDI framework and provides feedback at the end.

1 2 . 2 Method specific counseling for vasectomy

Guiding principles in vasectomy counseling

A friendly counselor who listens to a man's concerns, answers his questions, and gives relevant, adequate, clear and practical information about the procedure—especially its permanence—will help a man make an informed choice and informed voluntary decision and be a successful and satisfied user, without later regret. Involving his partner in counseling can be helpful but is not necessary or required. All Vasectomy clients must be adequately counseled to be able to give informed consent Pre surgery. Counseling for vasectomy should include:

- The permanence of the method - it is considered irreversible. Reversal procedures are not widely available, expensive, and do not guarantee the return of fertility.
- Advantages and disadvantages of the procedure.
- The availability/presentation of alternative methods—all available temporary methods of contraception.
- Description of the procedure, anesthesia to be used; risks and potential complications, pre- and post-operative instructions (Pre and after procedure instruction).Reassurance that vasectomy does not alter sexual function.
- Encouragement of questions and provision of accurate answers.
- Reassurance of the right to change the decision without loss of services.
- Complete informed consent form and let the client sign it

Explaining the effects of vasectomy to the client

- How vasectomy works
- Point out where the sperms are produced in the testes
- Explain how the tubes those carry the sperms (the vas deferens) will be cut so that sperms cannot

pass through

- Show him that the seminal fluid will still pass through to the urethra and that he will still be able to ejaculate normally.
- Assure the client that his sexual desire will not be affected and that he will still be able to have normal erection.
- Show clients where the small opening for NSV will be made, explaining that the puncture is not into their penis or testes.

Explaining the procedure to the client

1. The provider always uses proper infection-prevention procedures.
2. The client receives an injection of local anesthetic in his scrotum to prevent pain. He stays awake throughout the procedure.
3. The provider feels the skin of the scrotum to find each vas deferens—the two vasa in the scrotum that carry sperms.
4. The provider makes a puncture or incision in the skin:
 - In the no-scalpel vasectomy technique, the provider grasps the tube with specially designed forceps and makes a tiny puncture in the skin at the midline of the scrotum with a special sharp surgical instrument.
 - In the conventional vasectomy technique, the provider makes 1 or 2 small incisions in the skin with a scalpel.
5. The provider lifts out a small loop of each vas from the puncture or incision. Provider then cuts each tube and ties both cut ends closed with a silk thread
6. The puncture is covered with an adhesive tape, or the incision may be closed with stitches and bandaged, depending upon the procedure used.
7. The client receives instructions on what to do after he leaves the clinic or hospital.

The client needs to rest for 30 minutes after vasectomy, usually can leave within half an hour.

12.3 Informed Choice and Consent

The concepts of informed choice and informed consent are related but quite different in their intent. Informed consent means that a client understands the proposed medical procedure and the other options and then agrees to receive the proposed care. However, informed consent alone does not constitute informed choice. The purpose of informed choice is to ensure that all clients choose the best option/s for their health care needs after getting full information about all available options.

Informed Written Consent

- The provider must ensure that the client has made an informed and voluntary decision for

vasectomy before signing the consent form.

- Clients must be encouraged to ask questions to clarify their doubts, if any.
- Clients must be told that they have the option of deciding against the procedure at any time without being denied their rights to other reproductive health services.



11.4 Summary

FP counseling includes information how to help a client make an informed decision

Help the client carry out his or her decision and reduce possible regret after the procedure (Since the procedure is irreversible.

Discusses with the client how traditions or beliefs limit a woman's ability to freely choose and use Permanent methods

The decision to perform the procedure should be based on the best interests of the client, including medical, psychological, social, and cultural factors

Chapter Thirteen: Pre-procedural client assessment and preparation for vasectomy

Time allowed 90 minutes

Chapter Description;

This chapter is intended for participants to equip necessary knowledge on pre-procedural client assessment and preparation for vasectomy

Primary Objectives

At the end of this chapter participants will be

- Demonstrate pre-procedural client assessment and preparation for vasectomy

Enabling Objectives:

At the end of this section, participants will be able to:

- Demonstrate proper Pre procedure client assessment
- Identify conditions that indicate certain precautions that should be taken before or during the procedure
- Describe client instruction before vasectomy procedure.

Chapter outline

13.1	Introduction
13.2	Components of medical history and physical examination Pre vasectomy procedure
13.3	Medical eligibility criteria (MEC) for vasectomy procedure
13.4	Client instructions before vasectomy
13.5	Summary

13.1. Introduction



Activity 2:4.B Role play on history taking and physical examination (Pre vasectomy client assessment)

Instruction Select and assign one as a provider, other as a client to demonstrate on client story taking and P/E) and one observer

The role of the provider– makes sure you do effective History taking and P/E.

Observe and comment Details and relevance of History taking and P/E of the role play, discuss the detail with the steps and the procedures to provide permanent method

The observer uses checklist to see if the provider follows the steps listed under rapport building and gave feedback on address on the

components of the Pre vasectomy client assessment. 20 min
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The objectives of the Pre procedure assessment are to determine the client's eligibility for vasectomy, to identify any conditions that may increase the risks associated with the procedure, and to ensure that the client's decision is voluntary and informed. All recommendations regarding Pre procedure evaluation and post procedure follow-up assume the following general conditions:

- The client must provide voluntary, informed decision and written consent
- The decision to operate should be based on the client's total profile, including medical, psychological, social, and cultural factors.

The vasectomy service provider must conduct or supervise all Pre procedure medical evaluation. After reviewing the client's history, the physical findings, and the client's suitability, the surgeon conducts a final assessment immediately before procedure.

13.2. Components of medical history and physical examination Pre vasectomy procedure

Pre-procedural Medical Assessment

Clients, who have any medical conditions indicating that the procedure may involve above- normal risk, should be provided with temporary methods of contraception or referred to a hospital for further medical assessment. For clients needing medical attention, vasectomy may be postponed pending treatment.

Medical History

The medical history may be taken by individuals with different levels of training and expertise. Providers who are recording the history should use a standardized checklist. (See Table II-2) The personal and medical history should contain such general information as age, occupation, education, number and sex of living children, and age of youngest child.

Physical Examination

The physical examination should include the following: blood pressure, pulse,

examination of the local operative area, evaluation of the client's nutritional status, and other examinations as indicated by the medical history. The scrotum should be examined through visual inspection and palpation for pathology, thickness, scars, or infection; undescended testes, hydrocele, varicocele, mass or hernia. Each testis, epididymis, spermatic cord and vas deferens should also be palpated separately.

If the medical examination reveals conditions that are likely to increase the risks associated with the procedure, the health care provider may need to consult a more advanced facility before deciding to perform vasectomy. If the client is found unfit for the procedure for medical reasons, he should be referred for a complete evaluation of the condition identified in the examination; alternative contraceptive methods should be recommended and, if possible, provided. The physical examination is part of the medical screening, not part of the procedure.

Laboratory examinations

Routine laboratory tests are not necessary. However, if the health care provider suspects any clinical abnormalities needs to have access to basic laboratory facilities or to a referral center for laboratory examinations.

Table II-2: Components of Pre vasectomy procedure Medical History and P/E

COMPONENT		REASON
	History of bleeding disorders	Bleeding disorders could indicate the potential
	Previous scrotal or inguinal surgery or trauma	Scarring or adhesions could complicate a vasectomy procedure.
	Current or past genitourinary infections,	Past infections could have caused scarring and adhesions. Current infection could lead to acute post
	History of sexual impairment	Sexual impairment in the past could indicate preexisting psychological or physiological problems that could later be incorrectly attributed to the
	Current and recent use of medications	Use of medications could indicate medical problems that the vasectomy service provider should be aware
	Allergy to medications	The provider can help prevent complications by determining whether the client has ever had an allergic reaction to any of the medications or antiseptics to be
PHYSICAL EXAMINATION	Heart* (Auscultation, pulse, and blood pressure)	Checking the heart will help identify or rule out hypertension and cardiovascular disease that the vasectomy service provider should be aware of Pre
	Lungs* (Auscultation and respiratory rate)	Checking the lungs will help rule out infections and other lung disease that the vasectomy service provider should be aware of Pre surgery.
	Abdomen* (palpation)	Palpation of the abdomen will help rule out the presence of infections, organ enlargements, or masses that the vasectomy service provider should be aware of
	Genitals	Can rule out the presence of infections or masses that the vasectomy service provider should be aware of Pre surgery.

COMPONENT		REASON
	History of bleeding	Bleeding disorders could indicate the potential for
	Previous scrotal or inguinal surgery or trauma	Scarring or adhesions could complicate a vasectomy procedure.
	Current or past genitourinary infections,	Past infections could have caused scarring and adhesions. Current infection could lead to acute post
	History of sexual impairment	Sexual impairment in the past could indicate preexisting psychological or physiological problems that could later be incorrectly attributed to the
	Current and recent use of medications	Use of medications could indicate medical problems that the vasectomy service provider should be aware of Pre surgery.
	Allergy to medications	The provider can help prevent complications by determining whether the client has ever had an allergic reaction to any of the medications or
PHYSICAL EXAMINATION	Heart* (Auscultation, pulse, and blood pressure)	Checking the heart will help identify or rule out hypertension and cardiovascular disease that the vasectomy service provider should be aware of Pre
	Lungs* (Auscultation and respiratory rate)	Checking the lungs will help rule out infections and other lung disease that the vasectomy service provider should be aware of Pre surgery.
	Abdomen* (palpation)	Palpation of the abdomen will help rule out the presence of infections, organ enlargements, or masses that the vasectomy service provider should
	Genitals	Can rule out the presence of infections or masses that the vasectomy service provider should be aware of Pre surgery.

C. Health considerations in the Pre procedure screening process

13.4 Medical eligibility criteria (MEC) for vasectomy procedure



Activity 2:4.C Group work case studies and MEC

Instruction Read on MEC on a table below

Tell them to read Table II-3

Q1. What are the medical eligibility criteria for vasectomy?

Q2. What are the four conditions to perform vasectomy and identify listed problems under each condition?

Time allowed is 30 min

Below are the conditions described in the Medical Eligibility Criteria for consideration during /Pre procedure screening. There are four categories these are: Accept, Delay, Special and Caution.

All men can have vasectomy. No medical conditions prevent a man from using vasectomy.

- **C(Caution)** means the procedure can be performed in a routine setting but with extra preparation and precautions, depending on the condition.
- Previous scrotal surgery or injury
- Large varicocele or hydrocele (swollen veins or membranes in the spermatic cord or testes, causing swollen scrotum)
- Undescended testicles—one side only (vasectomy is performed only on the normal side. Then if any sperm is present in a semen sample after 3 months, the other side must be done as well). In addition, consider referral/further evaluation for possible complications.
- Diabetes
- In cases where there is increased risk, the service provider and the client must weigh the risks of the procedure against its benefits.
- Young age
- Depression
- Loups with positive (unknown) antiphospholipid antibodies or immune suppressive treatment
- **D (Delay)** means postpone vasectomy. These conditions must be treated and resolved Pre vasectomy can be performed. Give the client another method to use

until the procedure can be performed.

- Active sexually transmitted infection
- Inflamed (swollen, tender) tip of the penis, sperm ducts, or testicles
- Scrotal skin infection or mass in the scrotum
- Acute systemic infection or significant gastroenteritis
- Filariasis or elephantiasis
- **S (Special)** means special arrangements should be made to perform the procedure in a setting with an experienced surgeon and staff, equipment to provide general anesthesia, and another backup medical support. For these conditions, the capacity to decide on the most appropriate procedure and anesthesia regimen also is needed. Help the client choose another method* to use until the procedure can be performed
 - Hernia in the groin
 - HIV with advanced or severe clinical disease
 - Coagulation disorders (blood fails to clot)
 - Loups with severe thrombocytopenia

Nonmedical Precautions

Nonmedical precautions are precautions related to regret.

The following characteristics or situations are often linked to regret:

- Clients who are young,
- Who have no or few children,
- Who are unmarried or marriage instability,
- Who are uncertain about the decision?
- Who think that surgical contraception will solve problems unrelated to bearing children (e.g., a troubled marriage), or who are living in distressed circumstances (e.g., refugees, victims of natural disasters)

Such clients require the most careful counseling, and staff should weigh the needs of each person delay or providing services. See table II-3 for summary of precautions.

Table II-3: Conditions That Indicate the Need to Take Precautions before and during the Vasectomy Procedure

CONDITION	REASON	RECOMMENDATION
Young age	His decision may not be sound.	☐ Assess the client's decision to have a vasectomy. ☐ Ensure that he understands vasectomy should be considered permanent. ☐ Inform the client about the availability and effectiveness of long-term contraceptives.
Local infection: • Scrotal skin infection • Active STI • Balanitis • Epididymitis or orchitis	☐ Preexisting local infection increases the risk of post procedure/postoperative infection. ☐ Also, surgery/procedure at or near the site of an infected lesion can lead to wound infection, epididymitis, testicular infection, or sepsis if the organisms gain entry to other tissues or to the bloodstream during surgery.	☐ Treat the infection. Delay the vasectomy until the infection is resolved. ☐ Counsel the client about interim methods of contraception. ☐ Counsel clients with STIs about the risk of transmission to others and about preventing future infections. ☐ Counsel clients about the need to use condoms.
Systemic infection (including bacteremia, malaria, or	• Preexisting systemic infection also increases the risk of post procedure/postoperative infection.	• Treat the infection or refer the client and delay the procedure. • Counsel the client about interim methods of contraception.

Previous scrotal surgery	• Possible adhesions to cord structures may make it difficult to separate structures. • vasectomy may be difficult to perform if the skin is thickened from previous surgery.	• Assess the extent of adhesions; if the adhesions will not interfere with vasectomy, perform the procedure. • Take extra care when infiltrating the local anesthetic and pay careful attention to hemostasis.
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CONDITION	REASON	RECOMMENDATION
Intra-scrotal mass	Such a mass may indicate an underlying disease that could affect the health of the client or complicate the procedure.	• Diagnose the mass, treat abnormal findings, or refer the client for treatment. • If the findings do not interfere with vasectomy, perform the procedure. If you are unable to perform the vasectomy, counsel the man about interim contraceptive methods.
Inability to locate, isolate, or move the vas	Difficulties in locating, isolating, or moving the vas may make it difficult to access the vas through the puncture site.	• If the vas cannot be accessed through the puncture site, the client will need to have an incision over the vas.
Filariasis; Elephantiasis	These diseases may leave the vas difficult or impossible to locate.	• Counsel the client about interim methods of contraception until treatment is possible. • Even after treatment, extensive surgery (incision) may be required to locate the vas, and a vasectomy may not be possible to do under local anesthesia.

Large varicocele	• As a result of a large varicocele, the vas may be difficult or impossible to locate. • Repairing the varicocele and performing vasectomy in a single procedure may decrease the risk of complications.	• If you are experienced in concurrent procedures, repair the varicocele and perform the vasectomy through the varicocele repair incision. • If not, delay the vasectomy, refer the client to a facility with the appropriate staff, and counsel the client about interim methods of contraception. • If small, a varicocele can usually be isolated from the vas and does not interfere with VASECTOMY.
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CONDITION	REASON	RECOMMENDATION
Large hydrocele	• A large hydrocele may also leave the vas difficult or impossible to locate. • Repairing the hydrocele and performing vasectomy in a single procedure may decrease the risk of complications.	• If you are experienced in concurrent procedures, repair the hydrocele and perform the vasectomy through the hydrocele repair incision. • If not, delay the vasectomy, refer the client to a facility with the appropriate staff, and counsel the client about interim methods of contraception. • If small, a hydrocele usually does not interfere with VASECTOMY.
Undescended tests	• When undescended tests into adult hood, infertility is very likely if the disease is bilateral. • Unless fertility has been demonstrated (by pregnancy in the partner or by semen analysis there is no need to perform a vasectomy. • If the undescended tests is unilateral, the undescended testicle is likely to be nonfunctioning.	• If the client has bilateral undescended tests fertility has been demonstrated, extensive surgery will be required to locate the vas. • If the undescended tests unilateral and fertility has been demonstrated, you can perform vasectomy on the normal side. • If the semen analysis shows a persistent presence of sperm, more extensive surgery may be required to locate the other vas. • Counsel the client on interim methods of contraception until further surgery can be performed.
Inguinal hernia	During herniorrhaphy, the vas is exposed in the inguinal canal and can be ligated.	• An experienced surgeon can perform vasectomy concurrently with hernia repair. • Counsel the client about interim methods of contraception until treatment is possible.

CONDITION	REASON	RECOMMENDATION
Coagulation (hemophilia)	- Bleeding disorders lead to an increased risk of post procedure /postoperative hematoma formation, which in turn leads to increased risk of infection. - A severe bleeding disorder could lead to hemorrhage.	- Evaluate Pre performing vasectomy. - If the client has a significant bleeding disorder that cannot be corrected Pre surgery, do not perform the procedure. - If the procedure cannot be performed because of an unresolvable bleeding disorder, counsel the client about alternative contraceptive methods.
Diabetes	- Diabetics have an increased likelihood of post procedure /postoperative wound infection. - If signs of infection appear, treat the client aggressively with	- Correct hyperglycemia Pre vasectomy and perform vasectomy only with local anesthesia. - Follow the client closely after the procedure / postoperatively for signs of infection.
Depressive disorder	Decision making may not be sound.	- Assess client for mental status and for his decision to have vasectomy. - If necessary, delay the vasectomy and counsel the client about interim methods of contraception.

13.4 Pre procedure Client Instructions

- Bathe thoroughly especially the genital area and upper inner thighs,
- Wear clean, loose-fitting clothing to the health facility,
- Do not take any medication for 24 hours Pre the procedure (unless told to do so by the provider).
- He doesn't shave the genital area

After the procedure, the client should do the following:

- Rest for two days.
- If it is needed, put cold compresses on the scrotum for four hours, to decrease pain and bleeding.
- Wear snug underwear or pants for 2–3 days to help support the scrotum (point out image on slide). This will lessen swelling, bleeding, and pain.
- Keep the puncture site clean and dry for 2–3 days. The client can use a towel to wipe his body clean, but he should not soak in water.
- Avoid having sex for –seven days or till he is comfortable
- For three months after the procedure, use another effective FP method.
- Take the pain-relieving medicine provided when he is in pain.
- Return to the facility after three months for post vasectomy semen analysis. If there is no sperm cell (azoospermia) or a non-motile sperm count of less than 100,000/ml, the vasectomy is successful. If there are still any motile sperm cell/s or greater than 100,000/ml non motile sperm cells, semen analysis should be repeated after another three months.
- Vasectomy failure is confirmed, if there is/are motile sperm cells after six month post procedure/the repeat semen analysis.



13.5 Summary

The objectives of the Pre procedure assessment are to determine the client's eligibility for vasectomy, to identify any conditions that may increase the risks associated with the procedure, and to ensure that the client's decision is voluntary and informed

All men can have vasectomy. No medical conditions prevent a man from using vasectomy

Appropriate client instructions are important for safe provision of vasectomy

Chapter 14: The No-Scalpel Vasectomy (NSV) Procedure

Time allowed: 11.5Hrs.

Chapter description-

This chapter covers techniques for performing vasectomy or No-Scalpel Vasectomy with local anesthesia

Primary Objectives

At the end of this chapter participants will be able to

- Demonstrate no-Scalpel Vasectomy (NSV) Procedure

Enabling objective

At the end of this section, participants will be able to:

- Mention pre procedure tasks for vasectomy/NSV
- Demonstrate NSV/vasectomy in a simulated setting
- Perform No-Scalpel Vasectomy with local anesthesia following the standard procedures and surgical techniques.

Chapter outline

- | | |
|------|---|
| 14.1 | Overview of vasectomy technique |
| 14.2 | Steps of vasectomy procedure |
| 14.3 | Perform No-scalpel vasectomy under local anesthesia |
| 14.4 | Summary |

14.1 Overview of the vasectomy Technique

This Chapter contains information on vasectomy clinical skills and provides an opportunity to practice these skills on a scrotal model. the following description on vasectomy starts with the final steps for preparing the client for the vasectomy procedure and then discusses the 16 steps in vasectomy.

- **Pre procedure Tasks:**

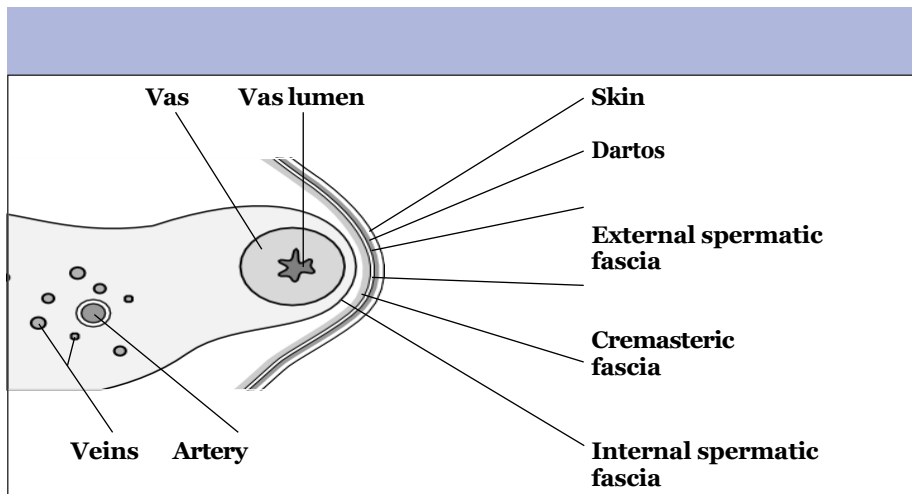
1. Ensure that the room is warm enough to relax the client's scrotum.
2. Greet the client.
3. Review the client's chart and history.
4. Verify informed consent.
5. Wash your hands.
6. Examine the site to ensure that the vas deferens are mobile.
7. Clip the site, if necessary.
8. Ensure that the procedure/operative site is clean.
9. Retract the penis upwards on the abdomen in the 12 o'clock position and anchor it comfortably
10. Perform a surgical scrub and put on sterile gloves.
11. Prepare a syringe to administer 10 cc 1% or Lidocaine (without epinephrine)
12. Prepare the procedure/operative site with a body-temperature antiseptic.
13. Isolate the procedure /operative site (scrotum) with sterile sheet(s) or towel (s) preferably one fenestrated drape

14.2 Steps of no scalpel vasectomy (NSV) procedure

Postoperative Care and Good local anesthetic technique are essential for a pain-free vasectomy. It also prevents local hematoma and injury to the testicular vessels, which may result from multiple blind injections. Dr. Li Shunning's anesthesia procedure, which is described below, achieves both of these objectives and also has several other advantages. The technique, which involves a deep injection alongside the vas, creates a vassal nerve block. Conventional techniques anesthetize only the area around the skin-entry site. Injection of the anesthetic away from the vasectomy site in the direction of the inguinal ring helps make skin entry easier. Care is taken when injecting the lidocaine to keep the needle away from the internal spermatic fascia that enclose the testicular artery and veins (*Fig 2.5.A*). Because the surgeon makes only a single needle puncture and one smooth injection for each vas, the risk of bleeding is reduced.

In a randomized trial comparing no-scalpel vasectomy to the conventional technique, men undergoing no-scalpel vasectomy with vasal block anesthesia reported experiencing less operative pain than did men undergoing conventional vasectomy (Sokal et al., 1999).

Figure II.5.A cross section of spermatic cord



NOTE: The following instructions and accompanying illustrations are for the right-handed operator. Some left-handed operators report that they have found it helpful to use a mirror when viewing illustrations designed for right-handed operators.

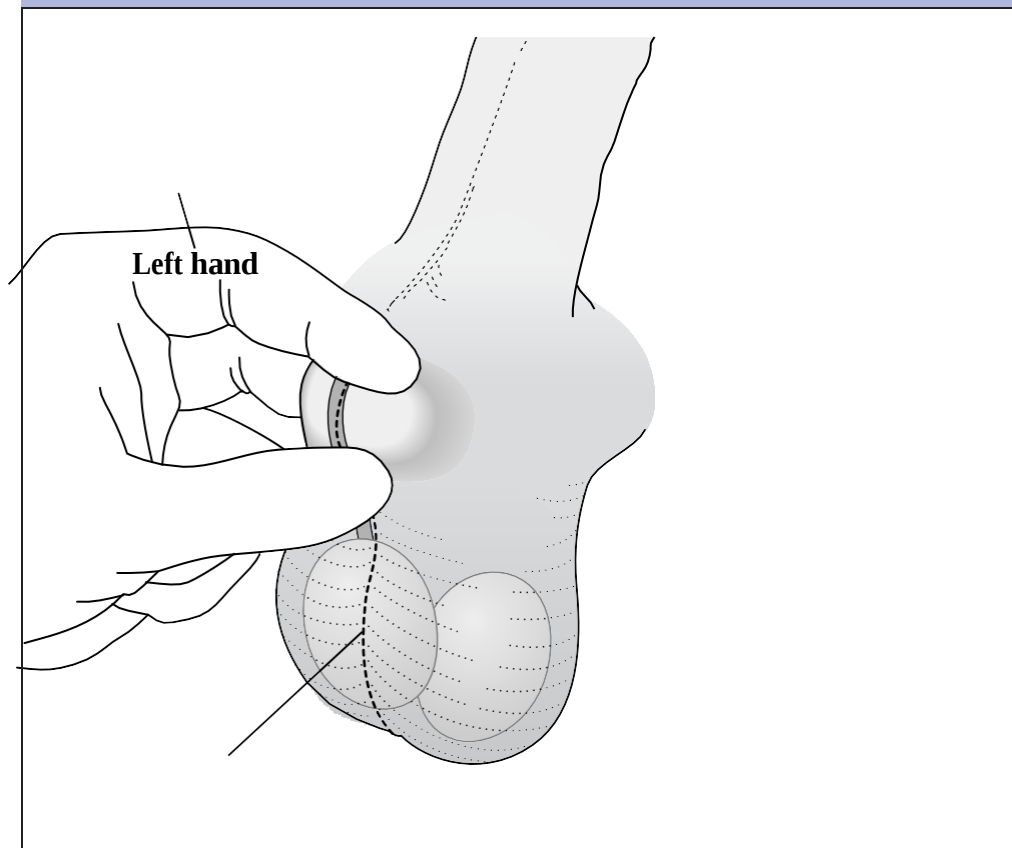
prepare a syringe to administer 100 mg (10 cc 1% or 5 cc 2%) lidocaine without epinephrine. This amount should be sufficient for skin wheal and vasal block anesthesia in most clients. Attach a $1\frac{1}{4}$ -inch (or metric equivalent) small-gauge needle to the syringe. A 25- or 27-gauge needle is recommended, but a 22- or 23-gauge needle can also be used.

Epinephrine is not recommended because it contracts the blood vessels and results in less apparent bleeding at the time of surgery. It is best to be able to detect and control all bleeding *during* surgery to prevent hematomas from forming after the client leaves the surgical facility. If the lidocaine does not contain epinephrine, small bleeding sites are more likely to be detected and controlled during surgery.

The maximum individual dose of lidocaine without epinephrine should not

exceed 4.5 mg/kg (2 mg/lb) of body weight. In general, it is recommended that the maximum total does not exceed 300 mg (Medical Economics, 2002). This equates to 30 cc 1% or 15 cc 2% lidocaine without epinephrine.

FIGURE II.5.B **The three-finger technique: Isolating the right**



N.B. The ideal entry site for no scalpel vasectomy is found midway between the top of the testes and the base of the penis median raphe

**The Three-Finger
Technique: Isolating
the Right Vas**

If you are right-handed, stand on the client's right side. (If you are left-handed, stand on the client's left side.) Place your left thumb approximately midway between the top of the testes and the base of the penis on the median raphe. With the middle finger of your left hand under the scrotum, palpate the vas and sweep it toward the raphe beneath your thumb. Hold the vas in position between the thumb and middle finger while placing your left index finger on top of the scrotum, slightly above the thumb (Fig. 2:5:B). Note that your fingers should be perpendicular to the vas. You will have created a "window" between your thumb and index finger through which you will make the puncture. Upward pressure from the middle finger, combined with downward pressure exerted by the index finger, creates a bend in the vas for easier entry. Maintain the three-finger hold as you anesthetize the right side.

The needle entry site is ²at the midline, over the vas deferens midway between the thumb and the index finger. Use only the tip of the needle to raise a super facial skin wheal, 1 to 1¹/₂ cm in diameter (Fig. 2.5C). To raise the skin wheal, hold the syringe at approximately a 5- to 15-degree angle (Fig.2:5D), with the needle bevel facing up. Inject lidocaine into the dermis and subcutaneous tissues; 0.5 cc is usually adequate.

FIGURE 2.5.C Raising the skin wheal

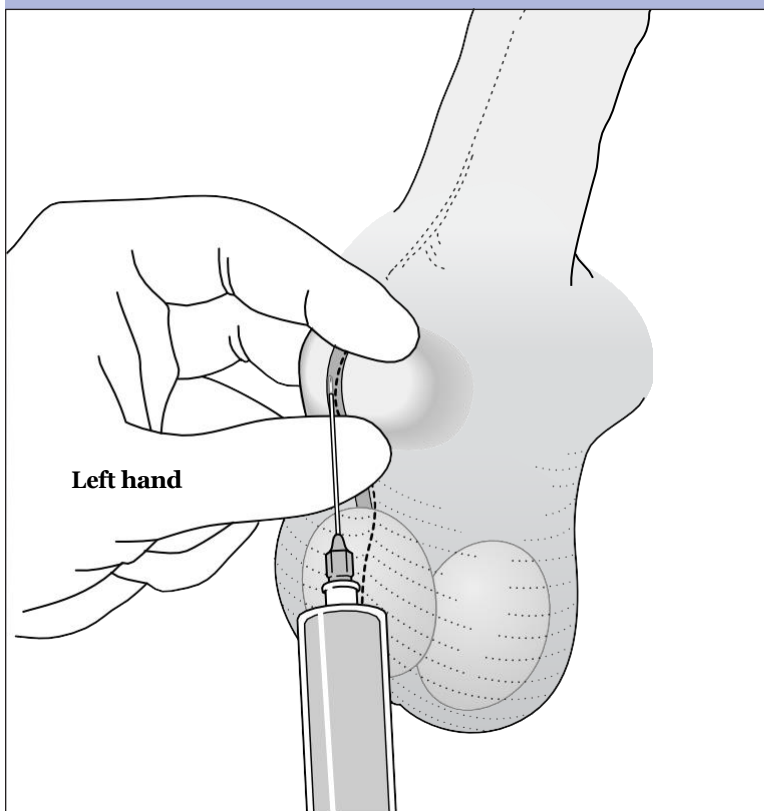
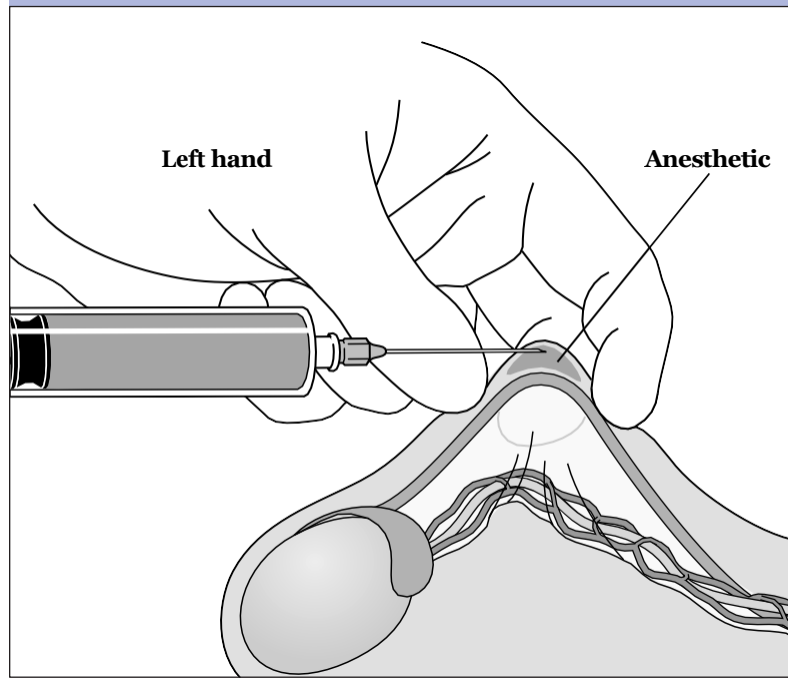


FIGURE 2.5D. Side view of the skin wheal



PITFALLS: Avoid two pitfalls when raising the skin wheal. First, do not inject the lidocaine too deeply. At this point in the procedure, you are anesthetizing only the scrotal skin. In the next step, you will create a vasal block that will anesthetize deeper tissues. Second, to avoid swelling around the vas at the puncture site, do not inject more than 1 cc of lidocaine. A persistent wheal will prevent the ringed clamp from closing properly around the vas.

Creating a vasal block is a critical difference from the way anesthesia has been traditionally administered for vasectomy. The steps described below create a vasal nerve block away from the operative site.

After making the superficial skin wheal,² advance the needle parallel to the vas within the external spermatic fascial sheath toward the inguinal ring (*Fig.2.5E*). Advance the

full length of the needle, $1\frac{1}{2}$ inches, without releasing any of the anesthetic. **Gently aspirate to ascertain that the needle is not in a blood vessel.** Without withdrawing the syringe, slowly inject 2 to 5 cc (depending on concentration) of lidocaine within the external spermatic fascial sheath around the right vas deferens.

proper position and the injection are performed inside the external spermatic fascia, there is no resistance to the injection. Remove the needle from the right sheath; do not inject lidocaine while withdrawing the needle. HINT: When the needle is in anesthetic both sides before entering the scrotum and occluding the right vas.

HINT: To hold the client's left vas in the three-finger grip while standing on his right side, you will be more comfortable if you take a step toward the client's head and turn a bit to face his feet. To approach the vas from this lateral position, reach across the client's abdomen with your left hand.

The next step will be to position the left vas under the anesthetized puncture site. To do this, begin by placing your thumb in the upper third of the scrotum while the index finger is in the middle third. (This is different from the three-finger hold on the right side.) As with the right side, position the middle finger beneath the scrotum to identify the vas and sweep it to the puncture site. Once again, use the middle finger to elevate the vas, while your thumb and index finger press downward to create a bend in the vas at a point directly under the puncture site. Now, however, the thumb is superior to the index finger.

(Fig.2.5.F). Note the differences between Figures 2.5.A and 2.5.F.

For a right-handed operator, isolating the left vas may be more difficult and awkward than was isolating the right vas. It may take time and practice to master. A left-handed operator will need to reverse these positions and thus may find isolation of the right vas more difficult.

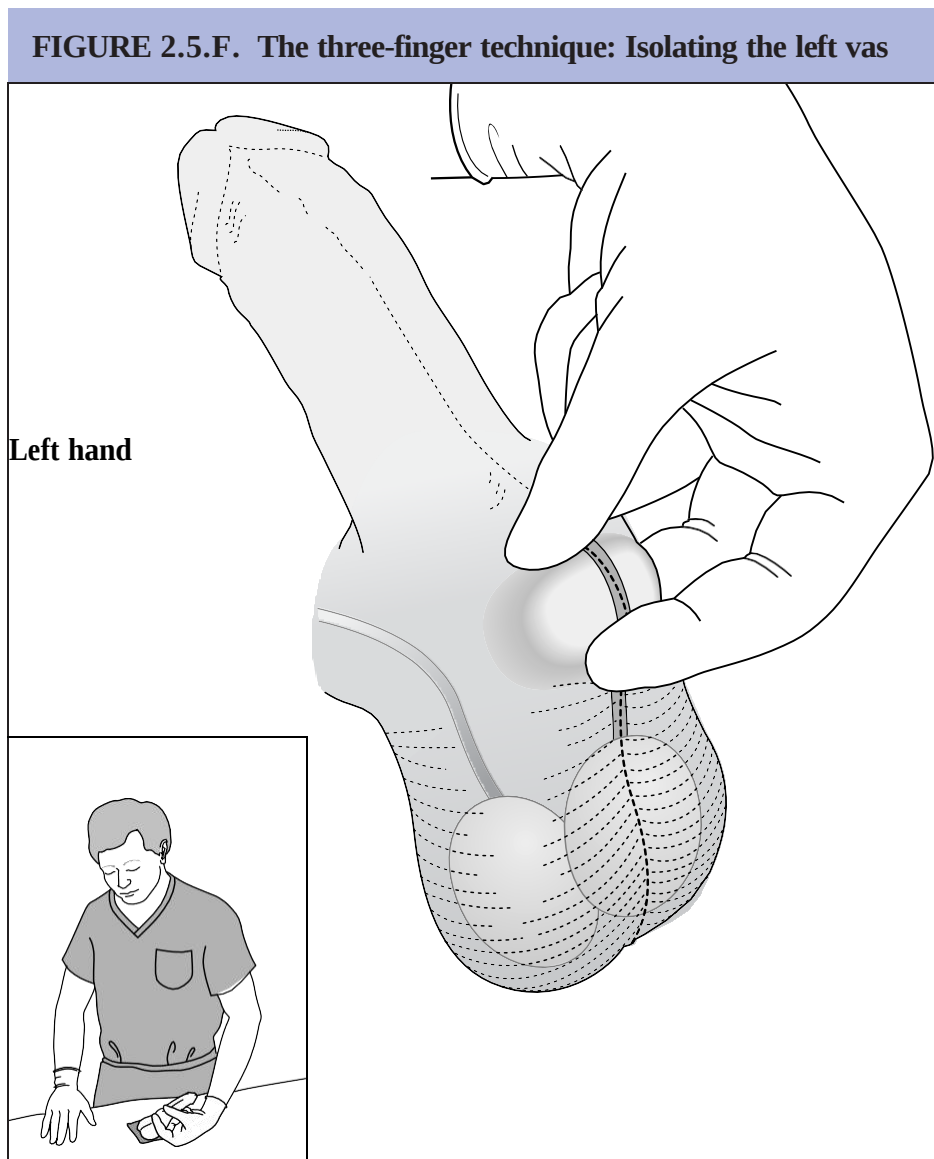
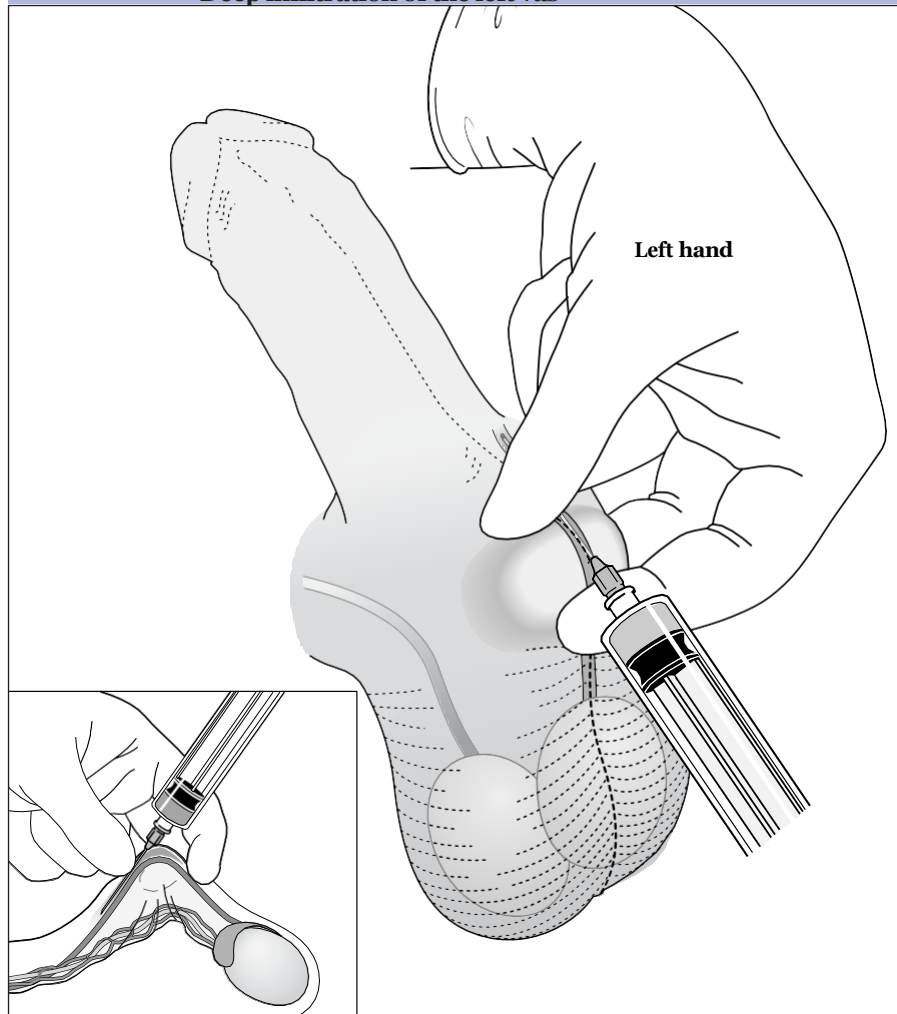


FIGURE 2.5.G. Anesthesia technique:

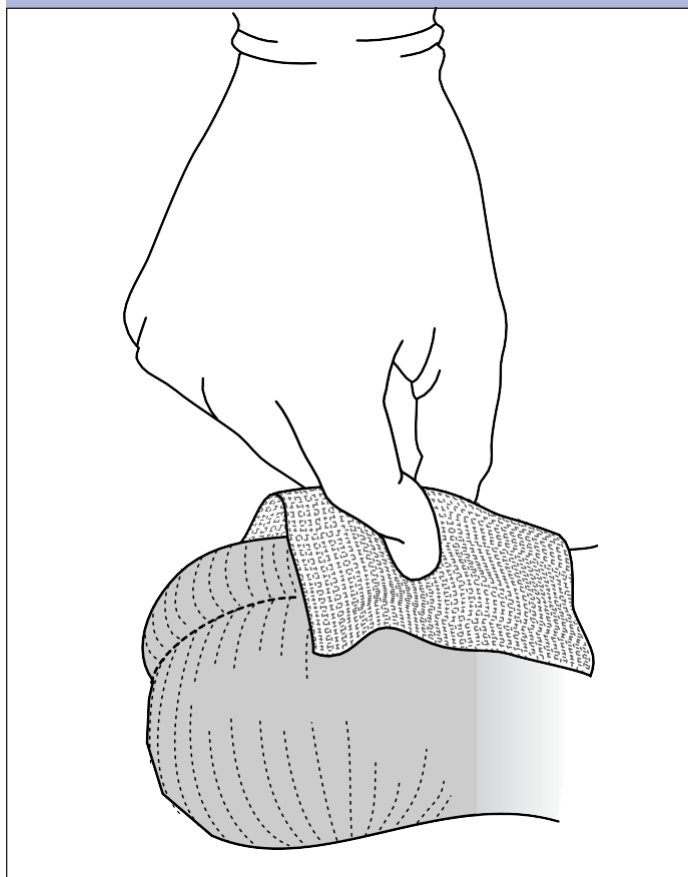
Deep infiltration of the left vas



**Creating the Vas Block:
Left Vas**

Reintroduce the needle through the same hole previously used; a second skin wheal is not needed. Advance the needle parallel to the left vas into the external spermatic fascia (Fig.2.5.G). As with the right vas, inject 2 to 5 cc of lidocaine within the external spermatic fascial sheath around the left vas deferens.

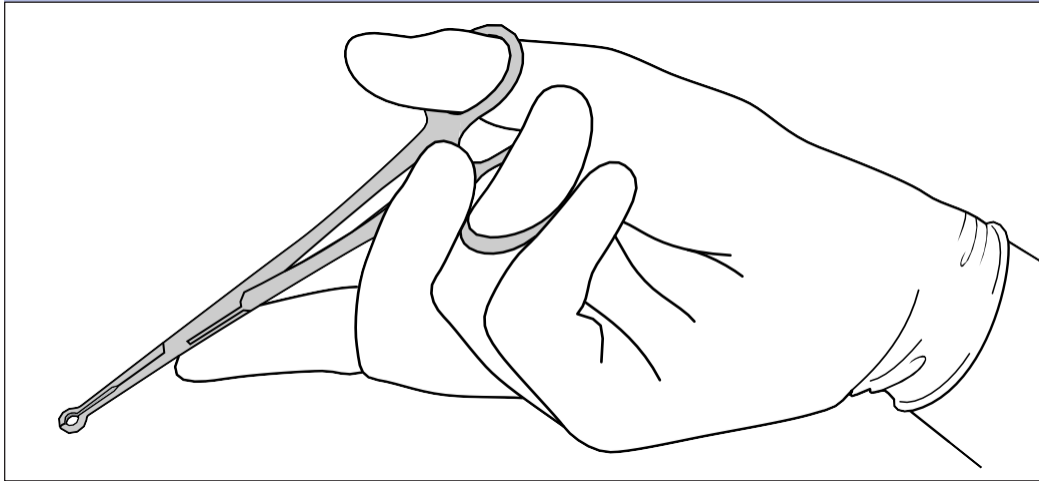
FIGURE 12.5,H Pinching the skin wheal



Pinching kin Wheal	After removing the needle, gently pinch the skin wheal between the thumb and forefinger for a few seconds to reduce its size and to soften and thin the local tissues (<i>Fig. 2.5.H</i>). PITFALL: Remember, a persistent wheal will prevent the ringed clamp from closing properly around the vas; gentle compression helps to reduce the size of the wheal. PITFALL: Remember, a persistent wheal will prevent the ringed clamp from closing properly around the vas; gentle compression helps to reduce the size of the wheal
If the Client Feels Pain After Surgery Begins . . .	If 2 to 5 cc of lidocaine has been injected into each side and the client still feels pain when the surgical procedure begins, repeat the vasal block on the painful side. Do not raise another skin wheal.
Holding the Ringed Clamp	<i>Surgical Approach and Occlusion of the Vasa</i> Although the no-scalpel technique is almost bloodless, an occasional superficial bleeder may be encountered. Ensure adequate hemostasis to help prevent the development of scrotal hematoma and subsequent risk of infection. Take all necessary precautions to avoid cross-contamination by strictly following the rules and guidelines for prevention of infection.

	NOTE: The following instructions and accompanying illustrations are for a right-handed operator. Some left-handed operators report that they have found it helpful to use a mirror when viewing illustrations designed for right-handed operators. When holding the ringed clamp, it is important to remember three points. First, for the greatest control and accuracy, hold the ringed clamp with the palm facing up and the wrist extended (<i>Fig. 25.I</i>). Second, apply the clamp at a 90-degree angle perpendicular to
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FIGURE 2.5.I. Holding the ringed clamp, with the palm up

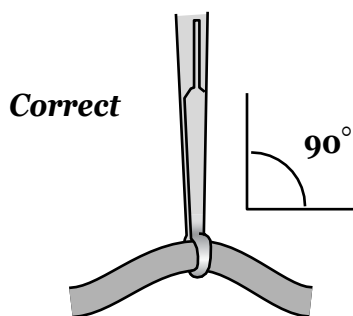


the vas (*Fig. 2.5.I a*); the palm-up hand position helps make this easier to do. Third, hold the shaft of the ringed clamp in line with the axis of the vas—parallel to and directly over the vas (*Fig. 2.5.I b*) **PITFALL:** If you fail to follow these three points, the clamp may not fix the vas completely (*Figs. 2.5.Ib and 2,5.id*), or it may grasp too much skin. The ringed clamp must encircle the entire vas.

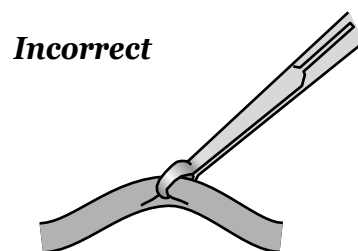
Using the three-finger technique, tightly stretch the skin overlying the vas—where the needle entered for anesthesia infiltration. The skin should be as thin as possible. Apply the ringed clamp, as described earlier, with the shaft at a 90-degree angle perpendicular to the vas (*Fig. 2.5.I a*). Open the ringed clamp, and press the tips onto the skin immediately overlying the vas (*Fig. 2.5.J*). Apply upward pressure with the middle finger underneath the scrotum to resist the downward push of the ringed clamp and to press the vas from below into the ring. Slowly and gently close the clamp around the vas, up to the first click-stop* **PITFALLS:** Avoid two pitfalls when applying the ringed clamp. First, be sure to elevate the middle finger underneath the scrotum. Otherwise, the finger will give way under the downward pressure of the ringed clamp, and you will have difficulty stabilizing the vas.

FIGURE 2.5.I. Grasping the vas with the ringed clamp, extracutaneous Ly (scrotal skin not shown for clarity)

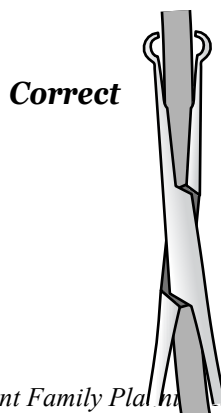
- a) Applying the ringed clamp at a 90-degree angle,



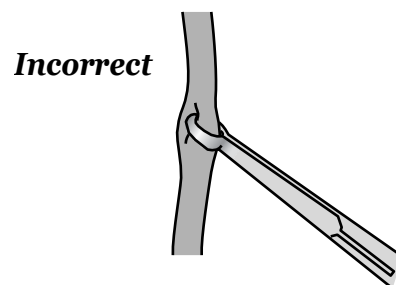
- b) If the ringed clamp does not grasp the vas at a 90-degree angle, the surgeon may



- c) Holding the shaft of the ringed clamp in line with the axis of the vas (parallel



- d) If the ringed clamp is not held parallel to the vas, the surgeon may grasp



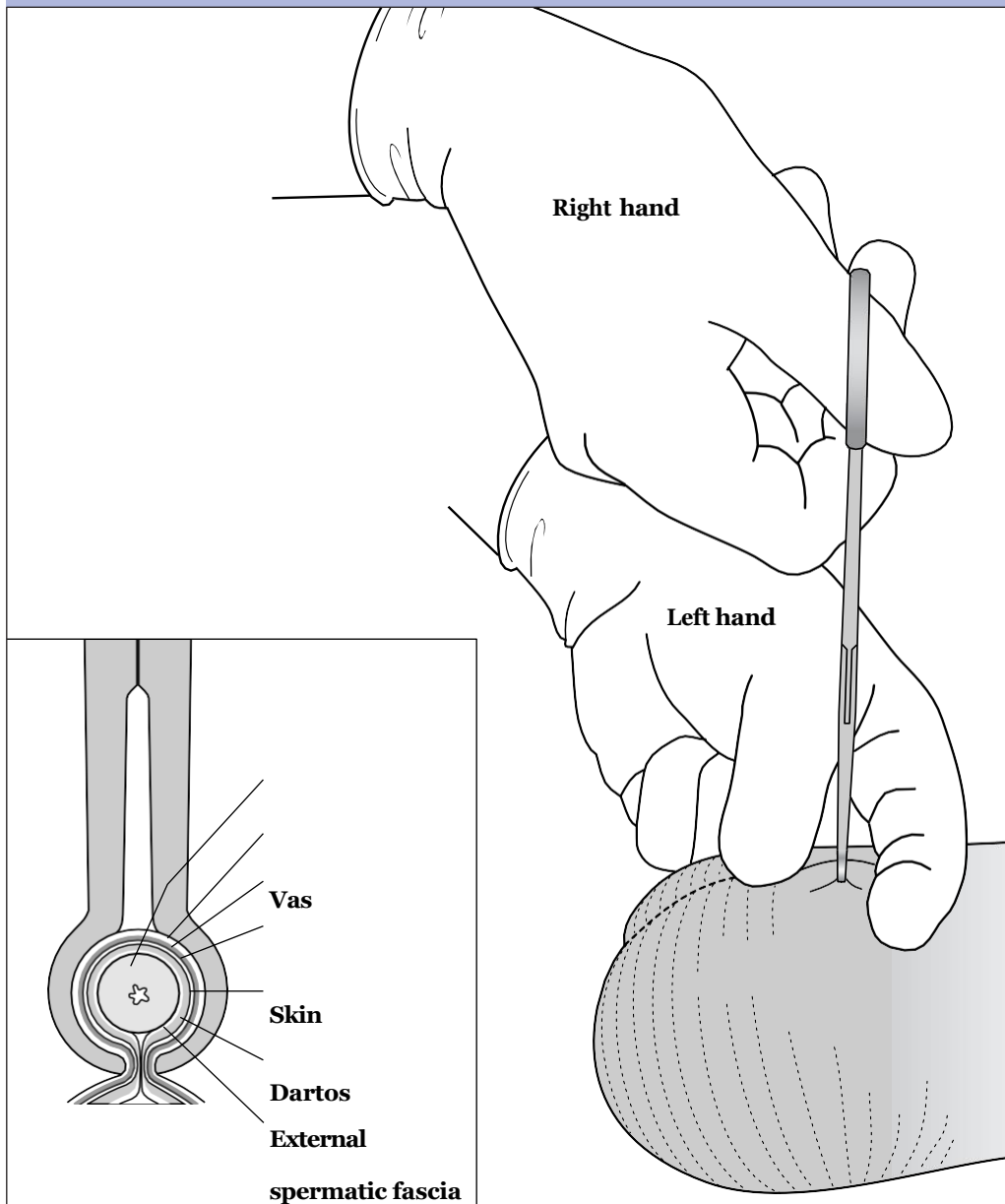
Second, do not grab too much skin with the ringed clamp. If you do, you will have difficulty dissecting and delivering the vas, and slight bleeding may occur. The skin should be stretched out over the vas just before the ring clamp is applied. If you grab too much skin, stabilize the vas with your left hand, then loosen the clamp slightly, without entirely

*The cantilevered feature of the ringed clamp that is manufactured in China is specially designed to prevent damage to the scrotal skin even when the clamp is locked tightly. Releasing it. Use the fingers of the left hand to ease some of the skin away from the clamp's hold, while retaining the clamp's grasp on the vas

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FIGURE 2.5,J. Pressing the tips of the ringed clamp onto the scrotal skin overlying the right vas



ALTERNATIVE: Instead of the tight-skin technique described on page 26, some surgeons apply the ringed clamp in a different way when they are first learning no-scalpel vasectomy. With the ringed clamp in the right hand, the surgeon gently pinches the scrotal skin with the ringed clamp, intentionally encircling more skin than is grasped with the tight-skin technique. With the left hand, the surgeon then eases out excess tissue from the tips of the ringed clamp. The surgeon may wish to use this alternative if he or she is having difficulty isolating only the vas.

**Elevating
Underlying
Right Vas**

While the ringed clamp is still grasping the scrotal skin and the underlying right vas, transfer the instrument to your left hand. Then lower the handles of the ringed clamp, causing a bend in the vas (*Fig. 2.5.K*). This motion elevates the vas. Continue to keep the shaft of the clamp in line with the longitudinal axis of the vas.

**Puncturing
the
Scrotal Skin**

The skin should be punctured in the previously anesthetized spot, midway between the top of the testes and the base of the penis. With the left index finger, press downward lightly to tighten the scrotal skin just ahead of the tips of the ringed clamp and over the anesthetized area (*Fig. 2.5 L*).

FIGURE 2.5.K. Lowering the handles of the ringed clamp to elevate the vas

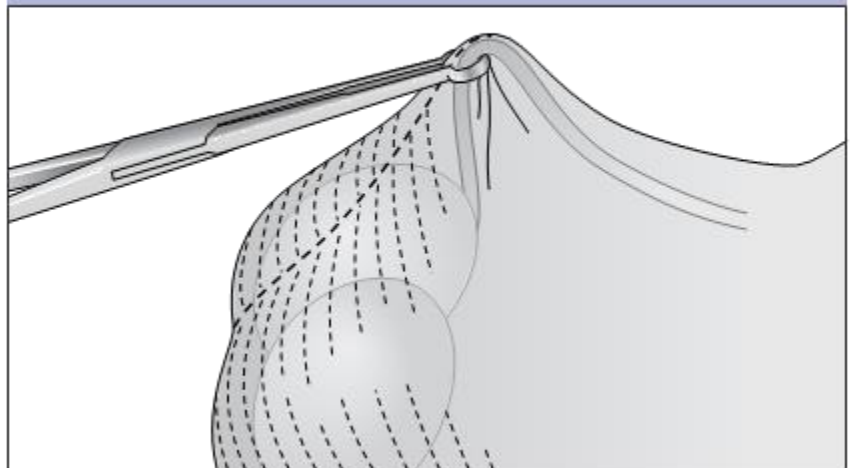
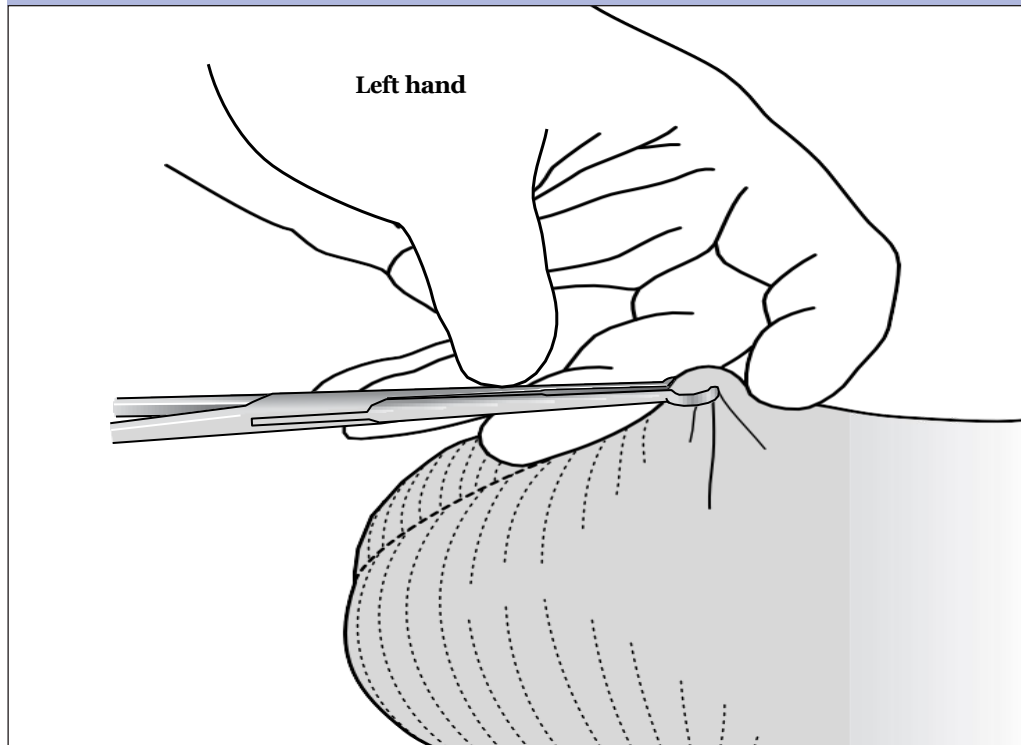
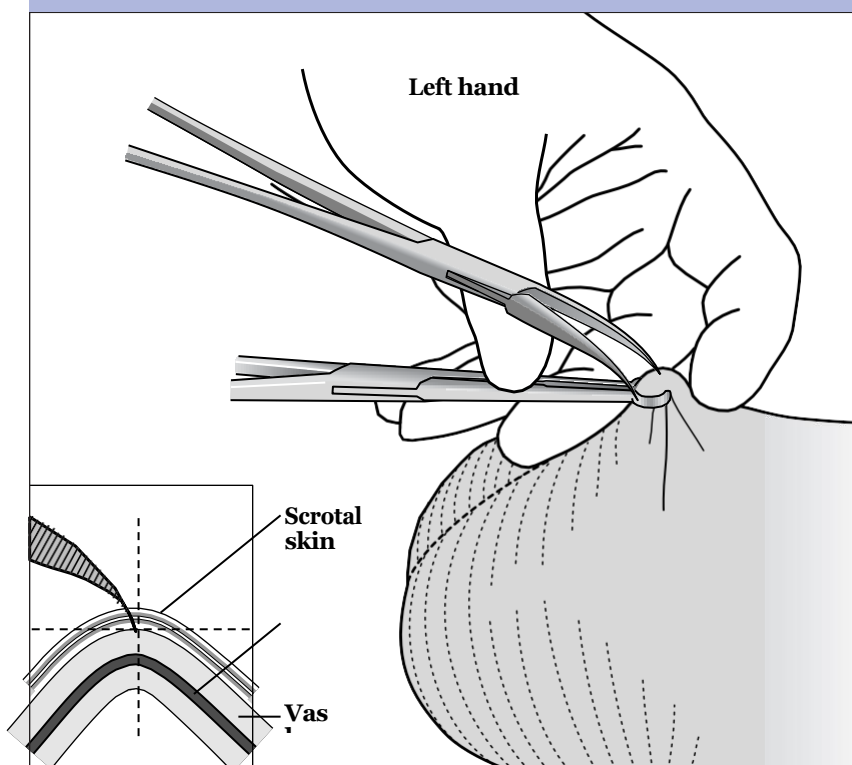


FIGURE 2.5.L. Pressing the index finger lightly downward to tighten the scrotal skin just ahead of the tips of the ringed clamp and over the anesthetized area



Hold the dissecting forceps in the right hand, points curved downward, in preparation for puncturing the vas. Hold the instrument so that there is a 45-degree angle between the closed tips of the forceps and the lumen. Then open the forceps; using only the medial blade of the forceps, pierce the scrotal skin **just superior to the upper edge of the ringed forceps**—where the vas is most prominent (*Fig. 2.5.M*). This piercing should result in a puncture of the midline of the vas, preferably at the point where the needle entered for anesthetic infiltration. When making the puncture, do not slowly push the dissecting forceps forward. Instead, use a quick, sharp, single movement to make a clear puncture of the skin down into the vas. Advance the medial blade of the forceps into the vas lumen.

FIGURE 2.5.M. Piercing the skin with the medial blade of the dissecting forceps



PITFALLS: Avoid three pitfalls when puncturing the scrotal skin. First, be sure to penetrate the anterior wall of the vas with the dissecting forceps. Otherwise, intact overlying fascia will prevent elevation of the vas out of the puncture wound. Second, if puncturing is too deep, transection of the vas might occur and the vas artery may be damaged, and bleeding will follow. Third, be sure to puncture the vas just superior to the upper edge of the ringed forceps; if the puncture is made in the tissue that is grasped by the ringed forceps, you will not be able to spread the tissues adequately.

After making the puncture, withdraw the medial blade of the dissecting forceps. Close the tips of the forceps. At the same 45-degree angle as before, insert both tips of the forceps in the same puncture hole, in the same line, and at the same depth as when you made the puncture with the single blade (*Fig. 2,5.N*). The ringed clamp remains in place and locked while the skin is punctured.

Identifying the Medial and Lateral Blades of the Dissecting Forceps

(a) When puncturing the scrotal skin

If you are right-handed, the medial (inner) blade is the left blade. Conversely, if you are left-handed, the medial (inner) blade is the right blade. If you use the medial blade to pierce the scrotal skin, your hand will not obstruct your line of vision.

(a) When elevating the vas deferens

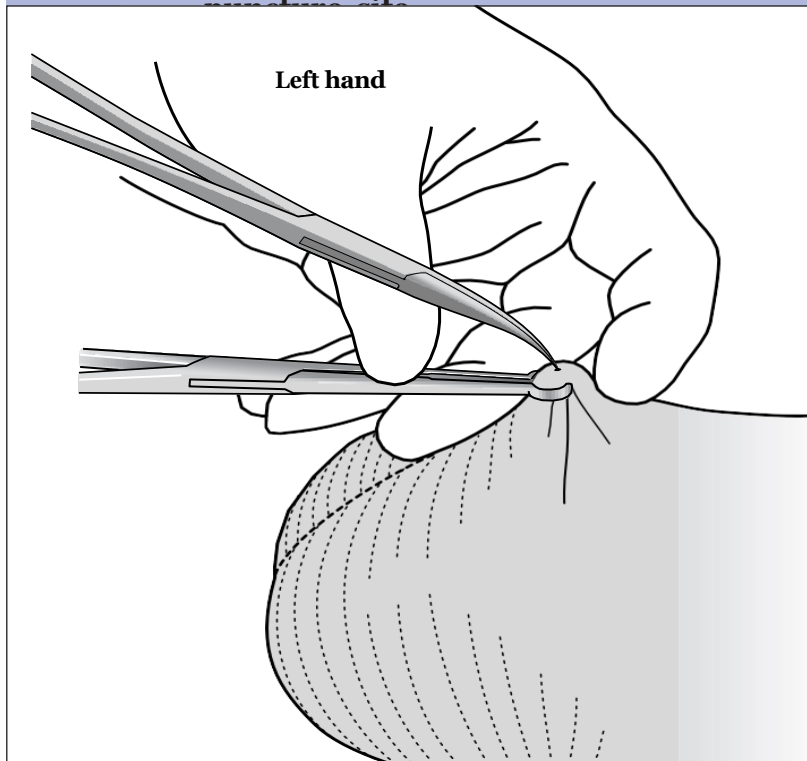
If you are right-handed, the lateral (outer) blade is the right blade. Conversely, if you are left-handed, the lateral (outer) blade is the left blade. If you use the lateral blade to pierce the wall of the vas deferens, you will easily be able to rotate the forceps and deliver the vas.

HINT: Right-handed operators should stand on the client's right side. Conversely, left-handed operators should stand on the client's left side.

Gently open the tips of the dissecting forceps transversely across the vas, to create a skin opening twice the diameter of the vas (*Fig. 2.5.O*). In one motion, spread all layers of tissue from the skin to the vas deferens. The tips of the forceps should penetrate deeply enough to expose bare vas wall). No harm is done if you enter the lumen. Be careful to keep the closed blades of the dissecting forceps parallel to the vas.

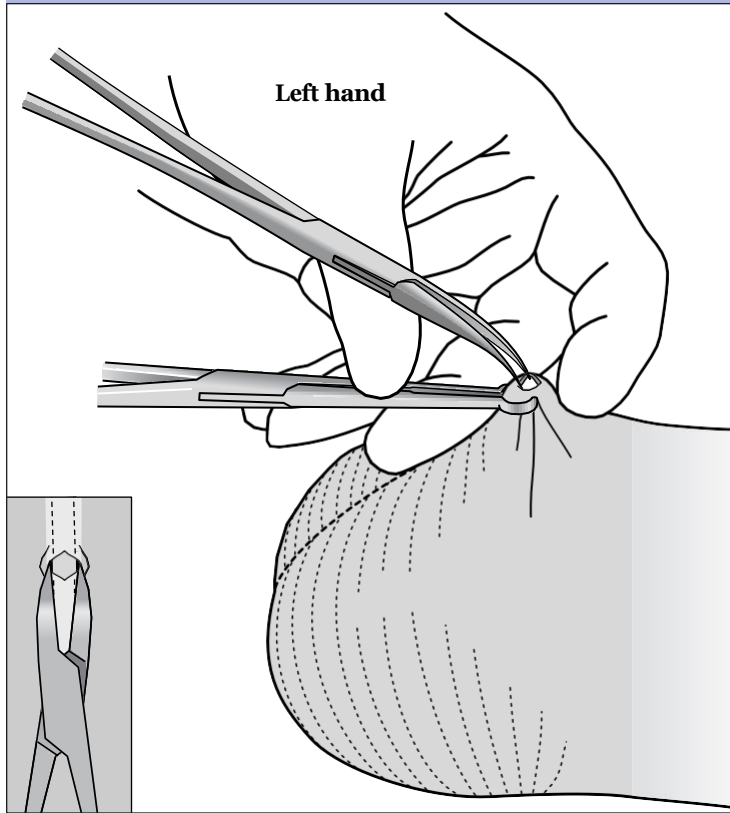
Spreading the Tissues

**FIGURE 2.5.N Inserting both tips of the
dissecting forceps into the
puncture site**



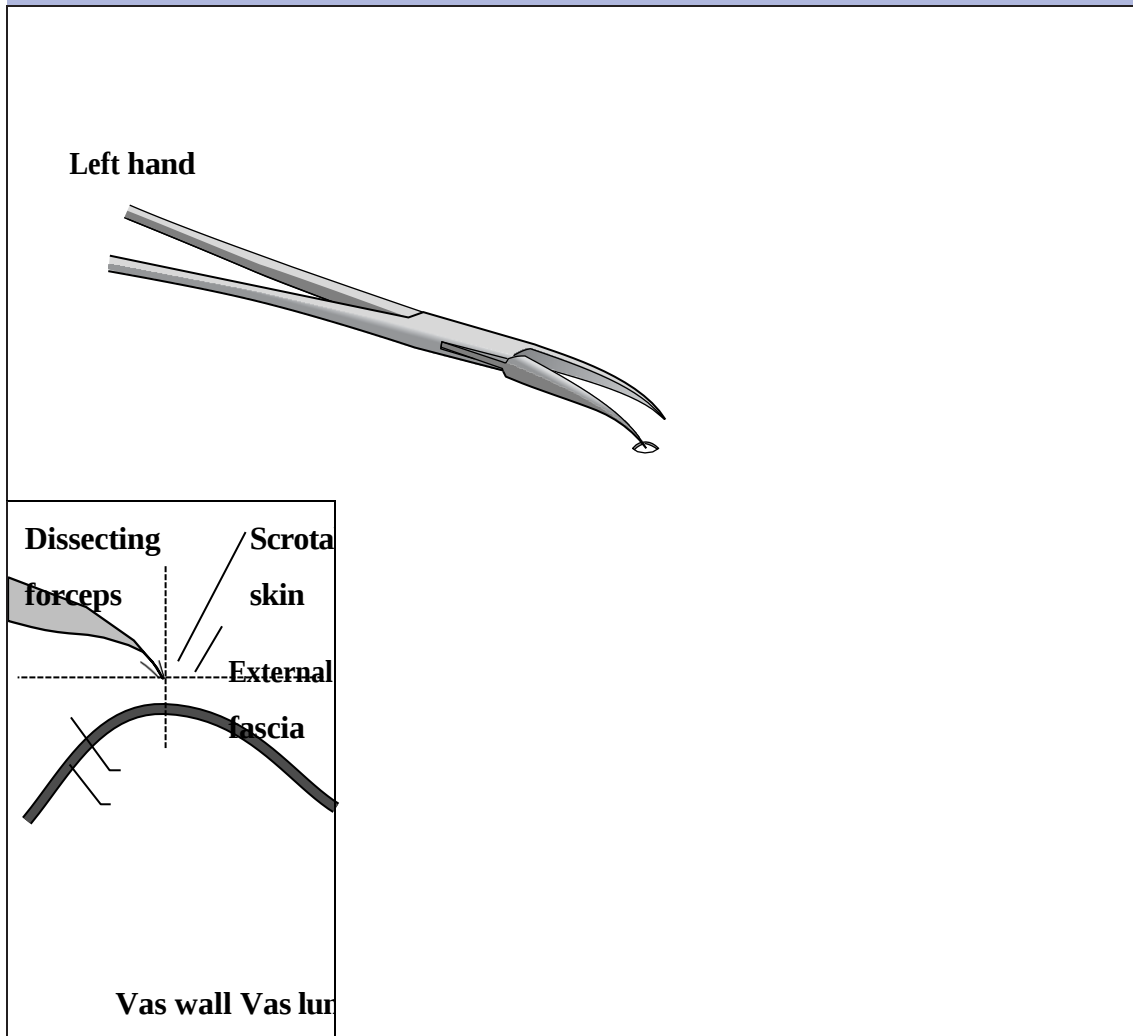
The skin and vas sheath will remain stretched open after the tissues are spread. By contrast, the opening in the vas will close after spreading; as it closes, the puncture site in the vas may look like a longitudinal groove. The stretched opening in the skin and sheath, which should be twice the diameter of the vas, will enable you to lift out a loop of the vas. The ringed clamp remains in place and locked while the tissues are spread.

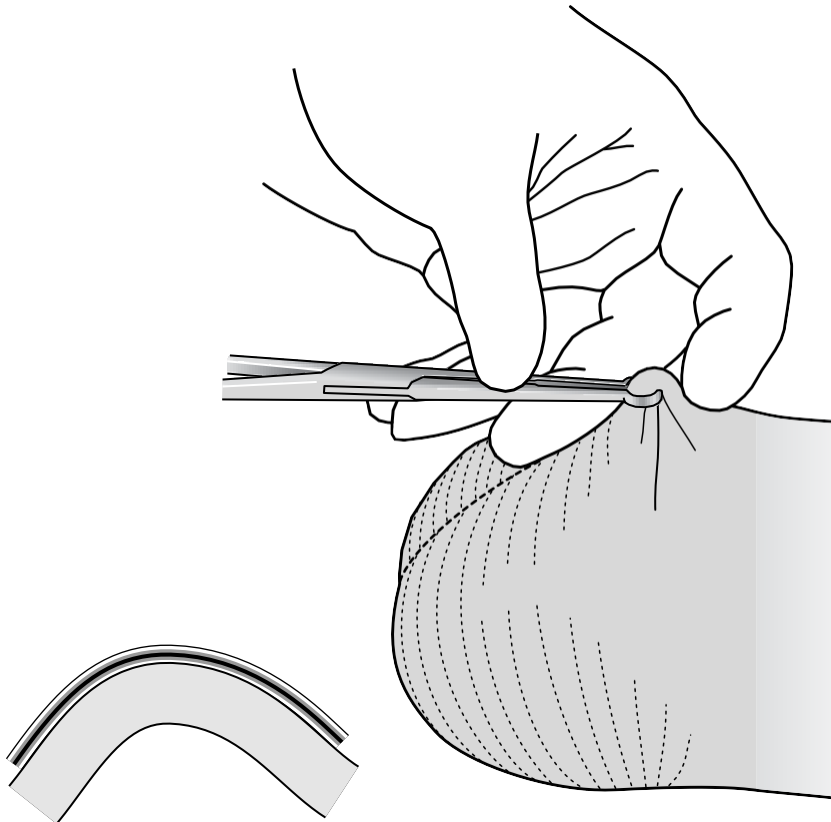
FIGURE 2.5.0 Spreading the tissues to make a skin opening twice the diameter of the vas



PITFALLS: Watch out for two pitfalls when preading the tissues. First, if you fail to open the blades of the forceps transversely at a right angle to the vas, one blade could slip out of the puncture site. This could cause an unnecessary skin tear. Second, be sure to apply appropriate counterforce to prevent the dissecting forceps from slipping out of the puncture hole. Maintain depth of puncture, but do not push down further than the original puncture.

FIGURE 2.5.P. Piercing the wall of the vas with the tip of the lateral blade of the dissecting forceps





(a) When puncturing the scrotal skin

If you are right-handed, the medial (inner) blade is the left blade. Conversely, if you are left-handed, the medial (inner) blade is the right blade. If you use the medial blade to pierce the scrotal skin, your hand will not obstruct your line of vision.

(b) When elevating the vas deferens

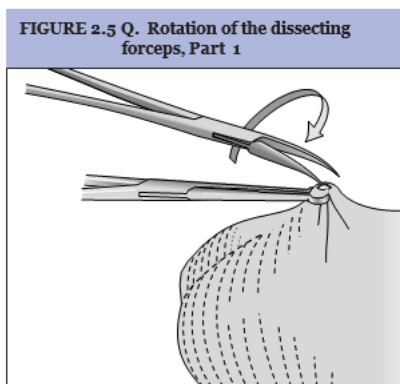
If you are right-handed, the lateral (outer) blade is the right blade. Conversely, if you are left-handed, the lateral (outer) blade is the left blade. If you use the lateral blade to pierce the wall of the vas deferens, you will easily be able to

rotate the forceps and deliver the vas.

HINT: Right-handed operators should stand on the client's right side.

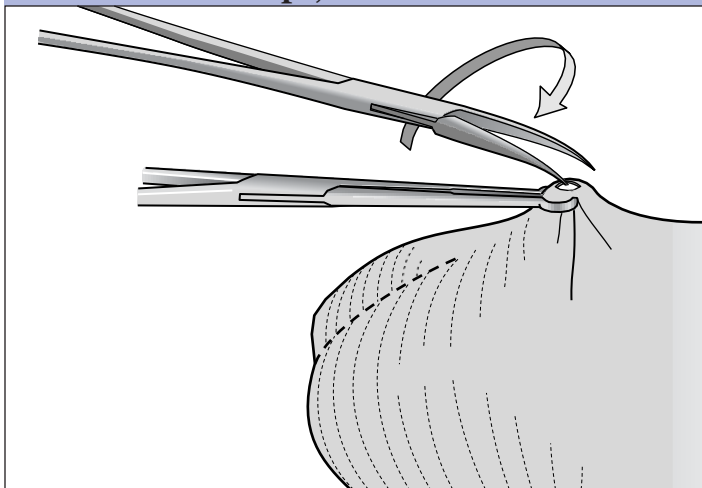
Conversely, left-handed operators should stand on the client's left side.

With the lateral blade skewering the vas and the ringed clamp still grasping the scrotal skin, rotate the handle of the dissecting forceps clockwise 180 degrees so the tips face upward, to deliver a loop of the vas deferens (*Figs. 2.5 Q. and 2.5.R*). As you rotate the



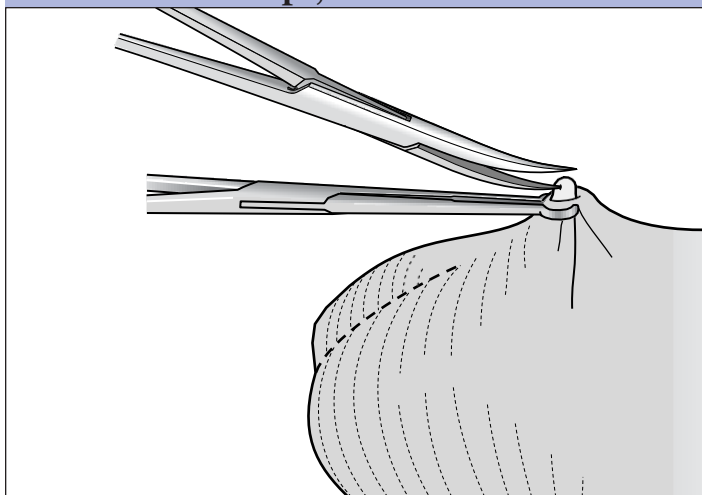
With the lateral blade skewering the vas and the ringed clamp still grasping the scrotal skin, rotate the handle of the dissecting forceps clockwise 180 degrees so the tips face upward, to deliver a loop of the vas deferens (*Figs. 2.5 Q. and 2.5.R.*). As you rotate the

FIGURE 2.5 Q. Rotation of the dissecting forceps, Part 1



dissecting forceps with the right hand, slowly release the ringed clamp with the left hand, thus

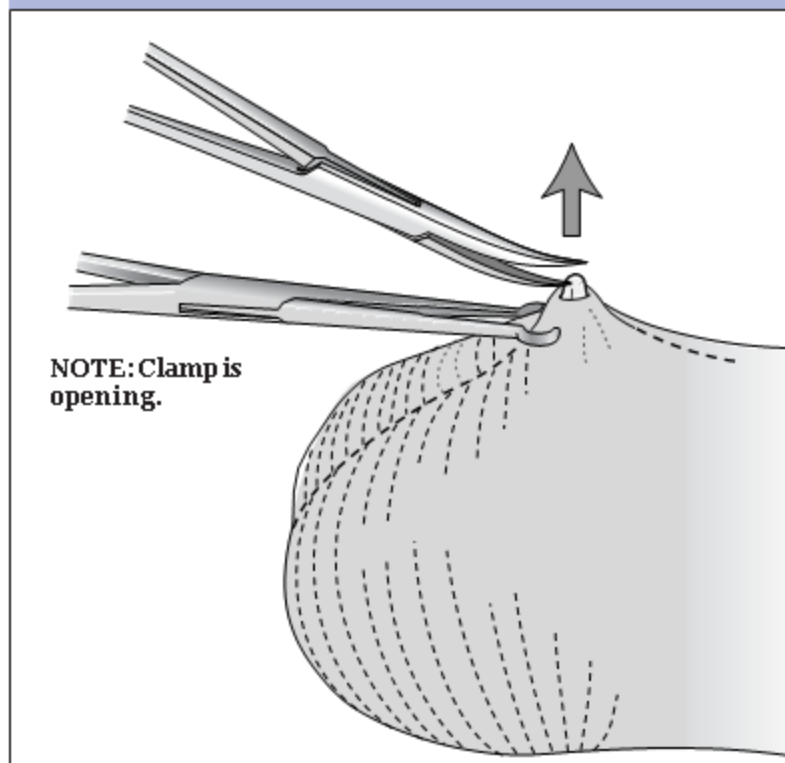
FIGURE 2.5.R. Rotation of the dissecting forceps, Part 2



allowing the forceps to elevate the vas through the puncture hole (*Fig. 2.5.S*). This simultaneous rotation with one hand and release of the ringed clamp with the other hand requires practice and coordination. At the beginning of the rotation, your hand will be palm-side down; after rotation, it will be palm-side up.

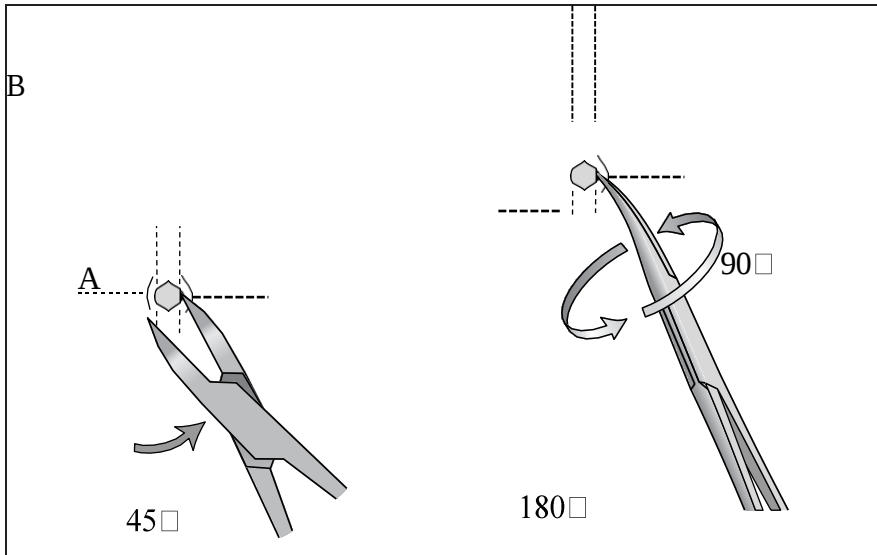
If the vas is difficult to deliver, more extensive spreading of the sheath may be required.

FIGURE 2.5.S Releasing the ringed clamp before elevating the vas with the dissecting in place



ALTERNATIVE: There is an alternative way to deliver and elevate the vas; instead of skewering the vas with the dissecting forceps, the surgeon uses the forceps to grasp the bare vas directly. The following description is for the right-handed surgeon. The doctor begins by spreading the tissue as described on pages 32 to 34. But after stretching the opening in the skin and sheath, the surgeon does not remove the dissecting forceps from the puncture hole. Instead, the surgeon gradually withdraws the forceps, holding them in line with the longitudinal axis of the vas, until he or she can see the tips (facing downward) at the sides of the bare exposed vas.

The doctor then moves the right hand, which is holding the dissecting forceps, and the right elbow toward the right, away from his or her side, until the dissecting forceps are at about a 45-degree angle to the longitudinal axis of the vas (see A, below). This movement causes the medial blade to slip out of the wound, while the tip of the lateral blade continues to touch the right side of the vas.

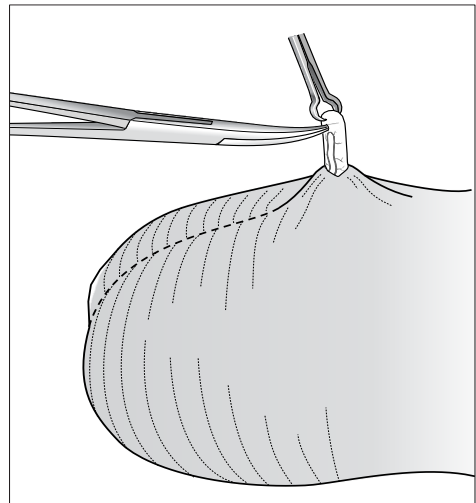


Next, the doctor gently closes the tips of the forceps, grasping the right half of the bare vas, with the tips of the forceps facing to the side. The surgeon then starts to rotate the dissecting forceps in a clockwise direction about 90 degrees (see B, above); he or she stops rotating and checks to be sure that no fascia are between the tips of the forceps. The surgeon then further rotates the forceps, completing a 180-degree turn. After the rotation, the curved tips of the forceps are facing up. The rotational movement slightly elevates the vas out of the wound.

deliver the vas while the ringed clamp is still locked; if you do, the vas may be severed. Second, if fascial tissue is caught between the tips of the dissecting forceps, you will not be able to rotate and elevate the vas.

Grasping the Vas with the Ringed Clamp

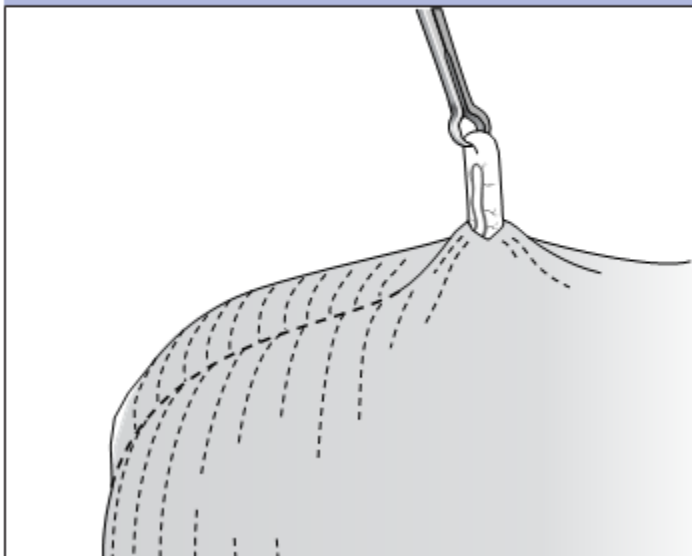
Once a loop of the vas has been delivered, gently close the dissecting forceps on the vas to prevent its slipping back into the scrotum while the ringed clamp is removed from the skin. Grasp a partial thickness of the loop of the vas with the ringed clamp. Sometimes you will see a groove on the vas—created when the vas was punctured (*Fig. 2.5 T*). After you have grasped a partial thickness of the vas, release the dissecting forceps.



**FIGURE 2.5.T. Grasping a partial thickness
of the elevated vas**

ITFALLS: Watch out for three pitfalls when grasping the vas with the ringed clamp. First, be careful not to release the dissecting forceps until you have grasped a portion of the loop of the vas with the ringed clamp (*Fig. 2.5.T*). This will prevent the vas from slipping back into the scrotum. Second, to avoid damaging the vas artery, be sure to grasp the vas at the crest of the loop (*Fig. 2.5.U*). Grasping elsewhere leads to asymmetrical stripping of the sheath from the vas. Third, grasp only a partial thickness of the vas. If the ringed clamp is placed around the entire circumference of the vas, the vas could slip back into the scrotum when it is divided.

FIGURE 2.5.U. Grasping a partial thickness of the elevated vas at the crest of the loop, with only the ringed clamp attached



Puncturing and Stripping the Sheath

With one tip of the dissecting forceps (tips facing up), gently puncture the vas sheath just below the vas, taking care not to injure the vas artery (*Fig. 2.5.V*). Then remove the tip.

Close the tips of the dissecting forceps. Insert both tips (tips facing to the side) into the punctured sheath (*Fig. 2.5.W*).

Gently open the dissecting forceps (*Fig. 2.5.X*). Strip the sheath and surrounding tissues downward for at least a 1 cm length of vas. This is a longitudinal, not a transverse, motion.

Be careful to avoid blood vessels. Clamp or cauterize bleeders immediately. When checking for bleeding, pay particular attention to the abdominal segment of the vas, which is where bleeding from the vas artery could occur (a common reason for hematoma formation).

FIGURE 2.5.V Puncturing the sheath with one tip of the dissecting forceps

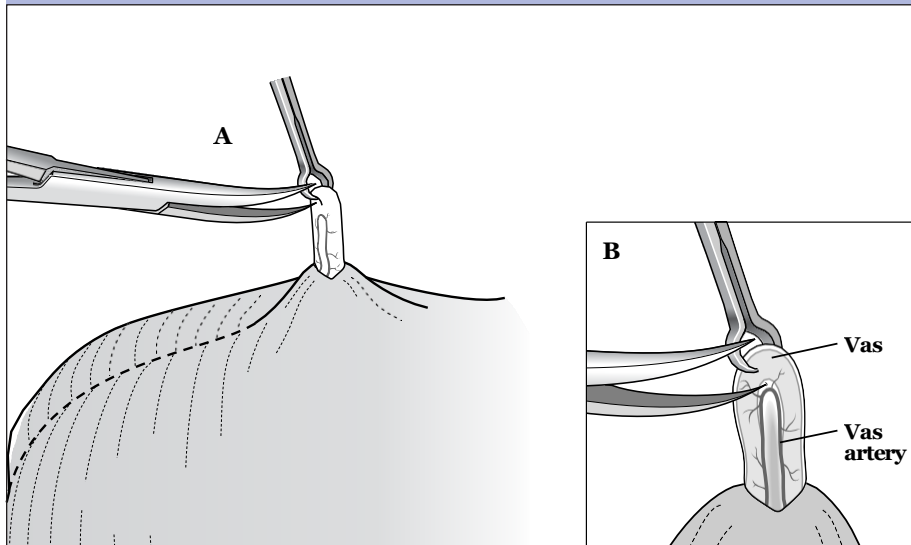


FIGURE 2.5.W Inserting both tips of the dissecting forceps into the punctured sheath (tips facing to the side)

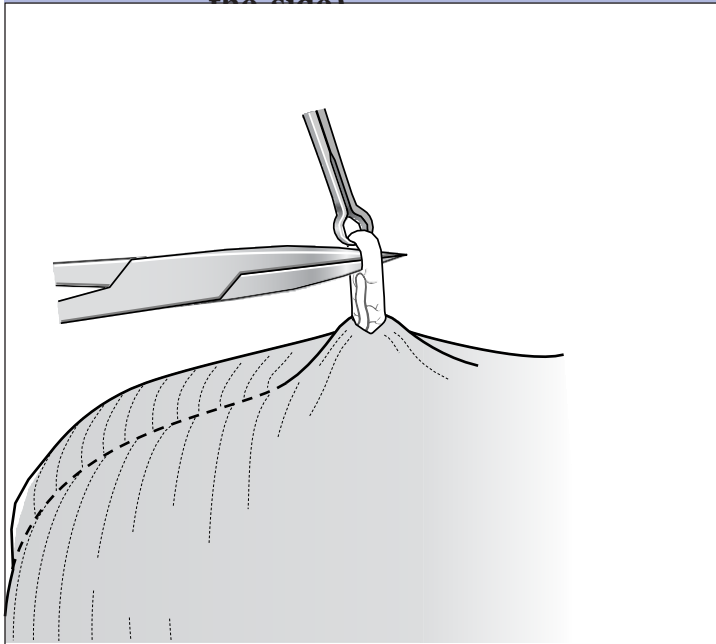
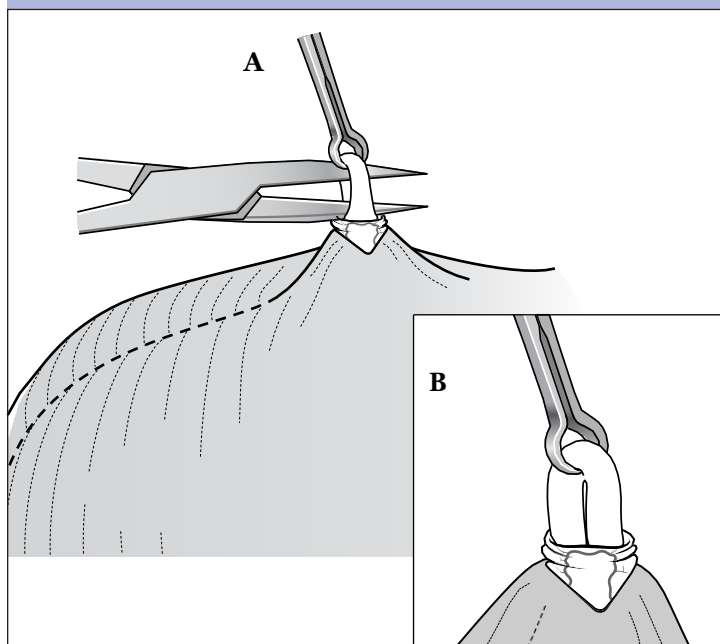


FIGURE 2.X. Opening the dissecting forceps to strip the sheath



Excising the Right Vas

Now occlude the right vas. Remember, no-scalpel vasectomy is a **surgical approach for isolating and delivering the vas that uses conventional methods of vas occlusion**. Two recommended methods—ligation with excision and fascial interposition, and cautery—are described below.

Ligation with excision and fascial interposition. When used with ligation and excision, fascial interposition improves the effectiveness of vasectomy. Fascial interposition places a tissue barrier between the two cut ends of the vas, as a result of the operator's suturing (or securing with a clip) the thin layer of tissue that surrounds the vas (the fascial sheath) over one end of the vas. The stump of the prostatic (proximal) end is outside the fascial sheath and, when the vasectomy is completed, the stump of the testicular (distal) end is inside the fascial sheath.

Before beginning ligation, make certain that all sheath and vasal vessels have been stripped away from the segment of vas to be occluded (*Fig. 2.5.Y*).

Ligate the isolated vas at two points about 1.5 cm or more apart using two separate ligatures, first ligating the prostatic end of the vas and then the testicular end.

After ligating the prostatic end, cut one end of the ligature, leaving a single uncut end of about 5 to 7 cm in length (*Fig. 28b*). **This will identify the prostatic end. The single uncut end of the ligature will be used to retrieve the vas, to facilitate fascial interposition.** Next, ligate the testicular end and leave both ends of the ligature about 5 to 7 cm in length (*Fig. 28c*).

HINT: When excising the section of vas, leave an adequate stump at each end of the vas (approximately 3 mm), to ensure that the ligature does not slip off later.

Some operators use absorbable suture material such as chromic catgut; others prefer nonabsorbable silk or cotton. There have been no studies done to ligating the prostatic end of then the testicular end After ligating the prostatic end, cut one

end of the ligature, leaving a single uncut end of about 5 to 7 cm in length (*Fig. 28b*). This will identify the prostatic end. The single uncut end of the ligature will be used to retrieve the vas, to facilitate fascial interposition. Next, ligate the testicular end and leave both ends of the

figure 2.5.Y Steps in performing vasectomy by ligation with excision

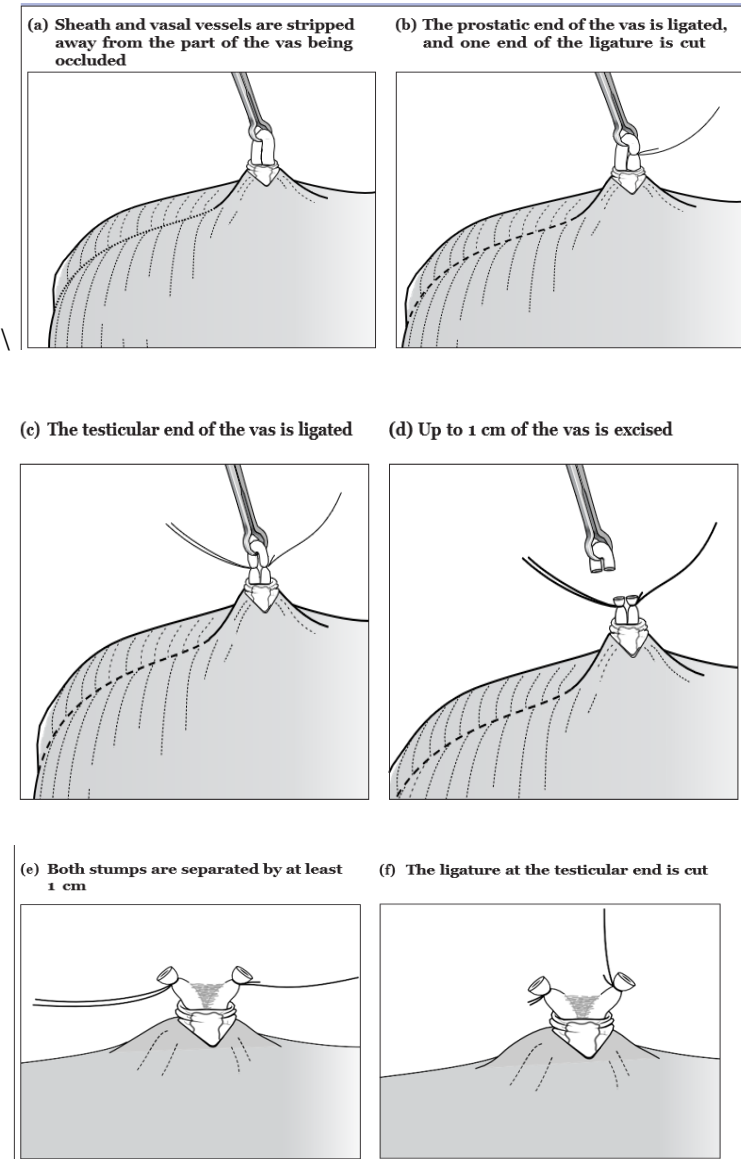
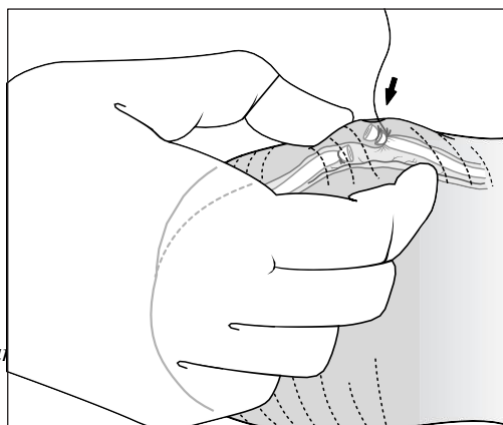
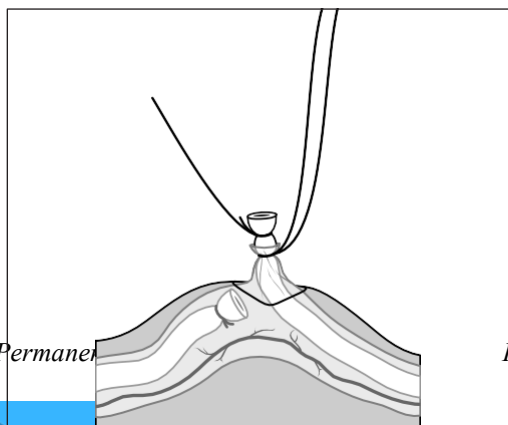
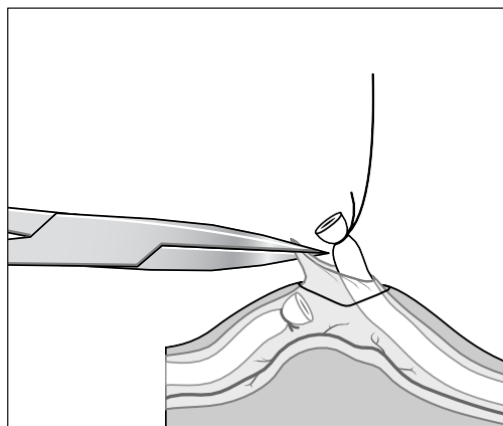
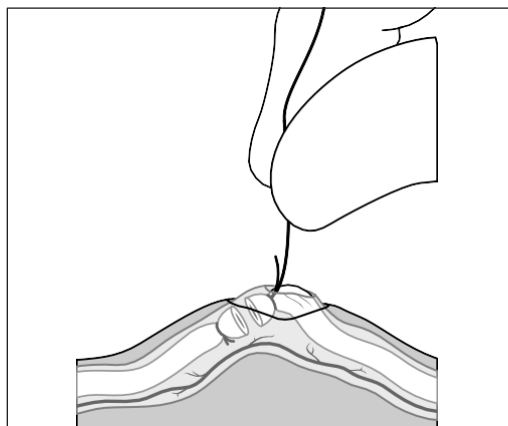
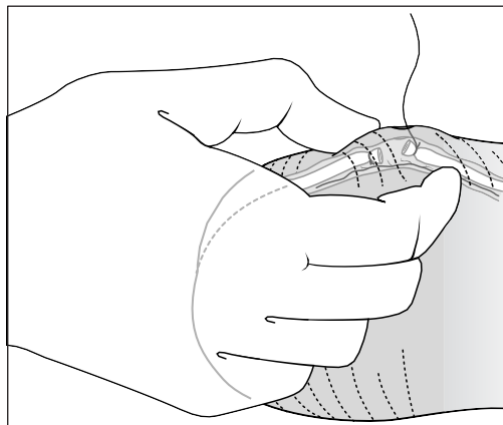
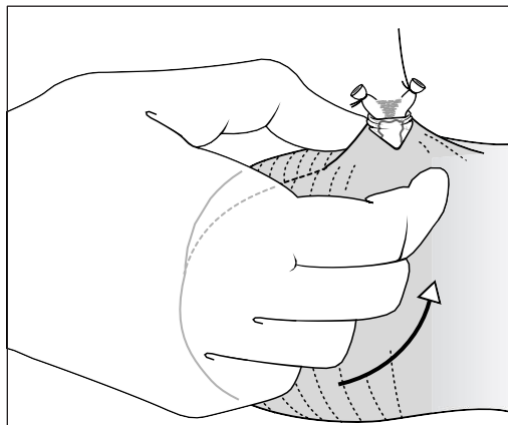


FIGURE 2.5.Z Steps in completing vasectomy by fascial interposition



(a) The operator gently pinches and pulls up on the scrotum with the thumb and index finger

(b) the prostatic end of the vas passes between the fingers into the scrotum

(c) ligature at the prostatic end is pulled through the puncture wound

with the tip of the dissecting forceps, the fascial sheath is grasped and held the fascial membrane is tied about 2 to 3 mm below the tie at the prostatic end

The stump at the prostatic end is allowed to slip back into the scrotum

too close by pulling both ligatures. Separate both stumps by at least 1 cm (*Fig. 28e*). Inspect for bleeding and control it when it is present. **Before the ligature of the testicular end is trimmed, hemostasis must be assured.** After assuring that both stumps are separated, cut the ligature at the testicular end (*Fig. 28f*).

Allow both ends of the vas to drop back into the scrotum by gently pinching and pulling up on the scrotum with the thumb and index finger (*Fig. 2.5.z.a*) until the prostatic end is felt passing through the fingers (*Fig. 2.5.z.b*).

Start the fascial interposition technique by very gently pulling the uncut ligature of the prostatic end through the puncture wound (*Fig. 2.5.z.c*). As the vas appears, it should be covered with the fascial sheath, which is seen as a translucent membrane covering the stump of the cut vas. If the translucent membrane (the fascial sheath) is not seen covering the vas, the vas should be dropped back into the scrotum and pulled out again, more gently.

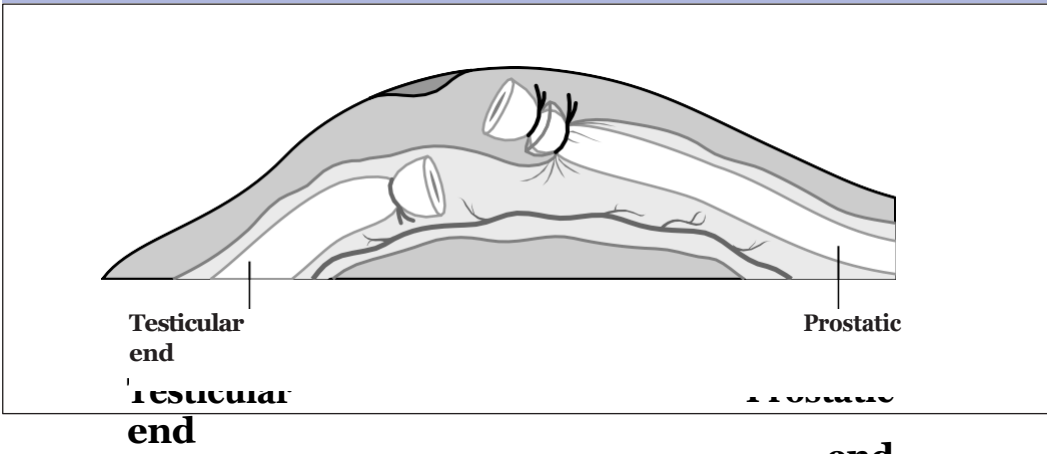
Carefully grasp and hold tight the fascial membrane, using the tip of the dissecting forceps (*Fig. 2.5.z.d*), tie the fascial membrane about 2 or 3 mm below the previous tie of the prostatic end (*Fig. 2.5.z.e*), and cut both ends of the ligature. Allow the stump of the prostatic end to drop back into the scrotum by gently pinching the scrotum so that the stump falls back to its original position (*Fig. 2.5.z.f*).

After assuring by palpation with the thumb and middle finger that the prostatic end is in the correct position, pull the single ligature just enough to see the stump of the prostatic end, then cut the single ligature and once again allow it to drop back into the scrotum. When fascial interposition is complete, the stump of the prostatic end should be outside the fascial sheath, and the stump of the testicular end should be inside the fascial sheath (*Fig. 2.5.z.1*).

PITFALL: Make sure not to tie the fascia with the vas while ligating to occlude the vas. If the fascia are tied with the vas during ligation, then fascial interposition will be difficult and may not be possible to perform.

Creating Fascial Interposition

FIGURE 2.5.z.1. The completed fascial interposition, with the stump of the prostatic end outside the fascial sheath and



Cautery. Another popular occlusion technique is cautery—electrosurgical (electrical coagulation) or thermal. This is done by inserting a needle electrode or cautery device into the vas lumen and desiccating the luminal mucosa of the vas to create a firm scar that will occlude the vas. With this method, only the inner layer of the vas (the mucosa) is sealed closed; the muscle wall of the vas remains intact.

There are many variations in the cautery technique, depending on the equipment used and the operator's preferences. For example, when a sharp-needle electrode is used, the operator pierces the vas wall with the needle and directs it into the lumen (*Fig. 2.5.Z.2*). When a blunt cautery unit is used, however, the vas is first hemi transected, to permit the cautery tip to enter the lumen. If the vas is only partially transected at this stage, it cannot slip back into the scrotum (*Fig. 2.5.Z.3*).

To achieve graded desiccation of only the mucosal layer, the operator inserts 1.0 to 1.5 cm of the cold cautery tip into the lumen. Current is then applied, and the tip is slowly withdrawn. Depending on the equipment and the electrical current or strength of the battery, the time needed to cauterize the mucosal layer will vary. Doctors who are experienced with cautery usually note changes in the vas that indicate the mucosa has been desiccated. (For example, the mucosa blanches, and a small amount of smoke escapes from the tissue.) After cauterizing in one

FIGURE 2.5.z.2. Cautery with a sharp needle electrode (done in each direction)

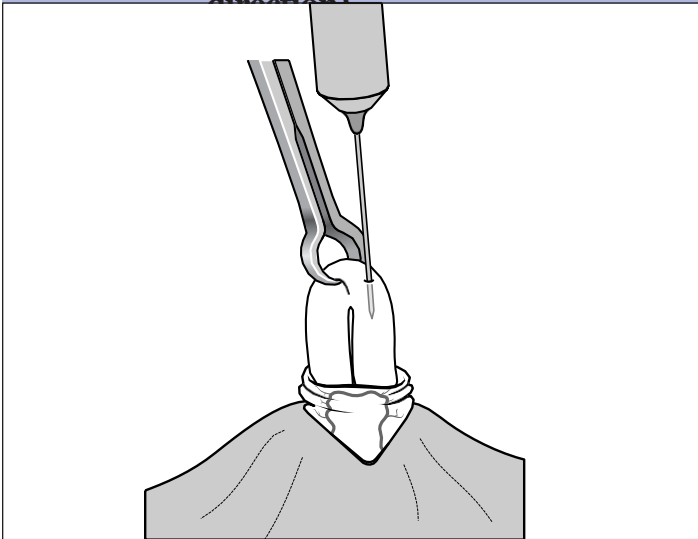


FIGURE 2.5.z.3. Cautery with a blunt wire inserted into the hemitranssected vas (done in each direction)

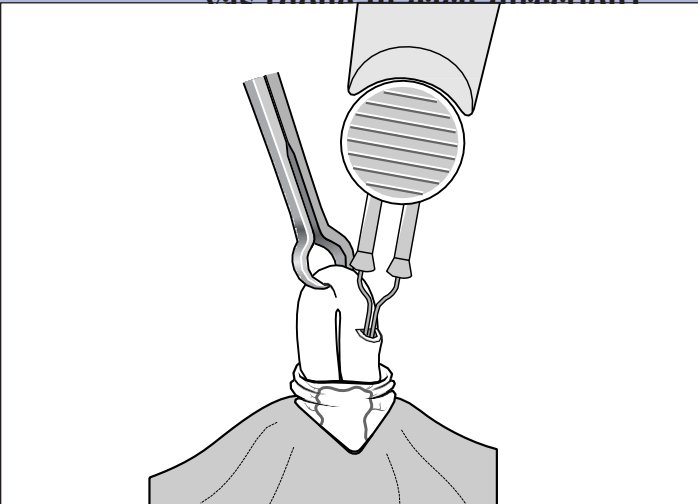
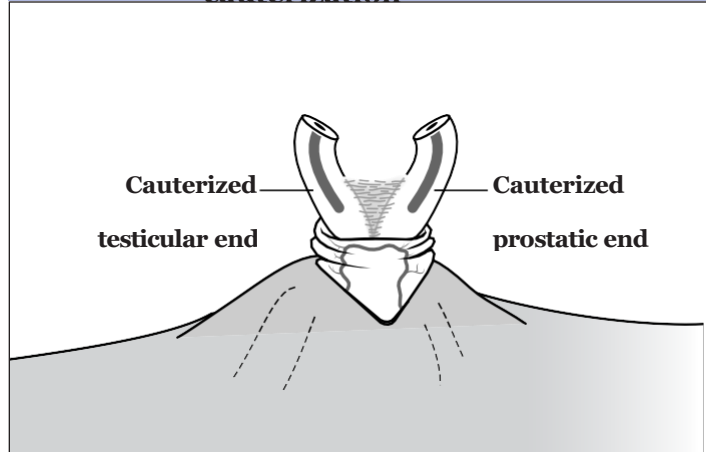


FIGURE 2.5.z4. Sometimes a segment of the vas is removed following cauterization



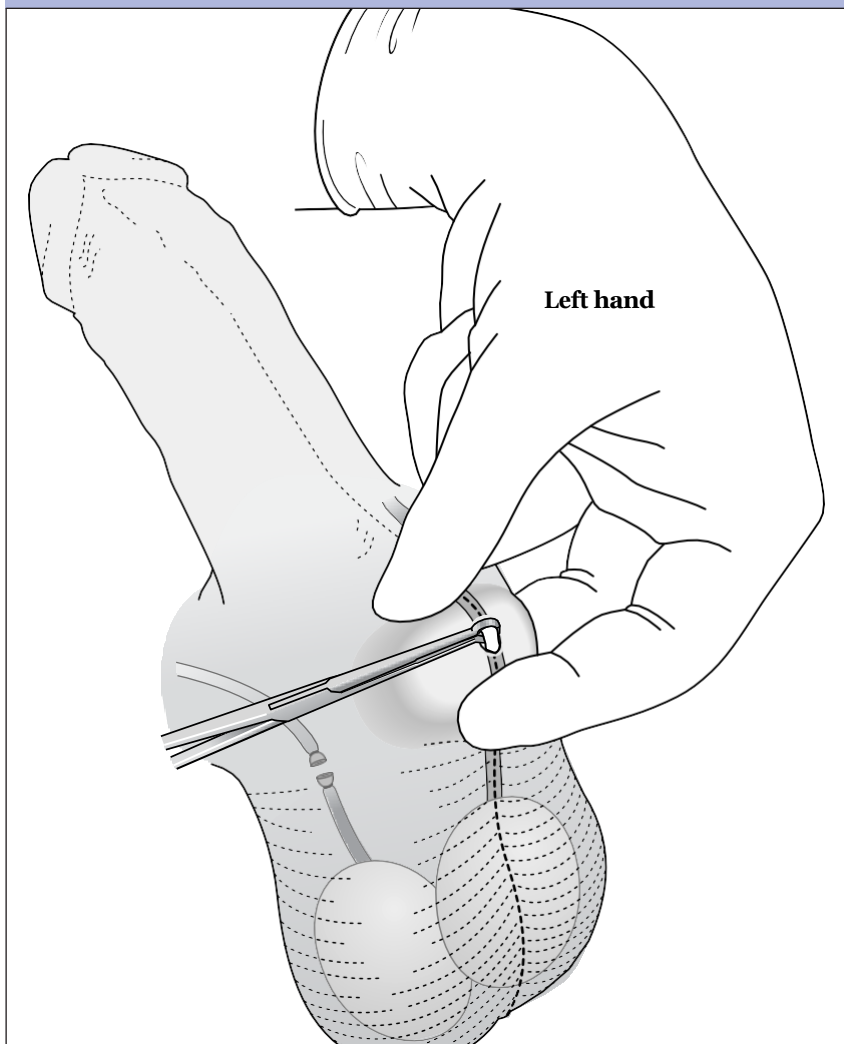
direction, the operator turns off the cautery unit to allow the tip to cool before cauterizing the vas in the other direction.

The vas is then divided. Some doctors remove a segment of the vas (*Fig2.5.z4*) and others do not. Fascial interposition may also be used after the vas is occluded by cautery; however, there is no evidence that fascial interposition leads to a more rapid decrease in sperm counts than cautery alone.

The same procedure is followed for the second (that is, the left) vas.

PITFALL: When using cautery, avoid damaging the muscle of the vas; muscle damage can lead to necrosis, with subsequent sperm leakage, granuloma, and recanalization.

FIGURE 2.5.z.5. Isolating the left vas before occlusion



Adjust the left hand to grasp the left vas deferens, **Isolating the Left Vas before Occlusion** using the three-finger technique (*Fig. 2.5.z5*). As described on page 21 of the anesthesia chapter, place the middle finger below the scrotum, with the thumb and index fingers above the scrotum; position the vas directly under the previously opened puncture site.

This position may be awkward at first, but with practice the right-handed operator will be able to isolate the left vas as smoothly as the right. Holding the vas with the left hand frees the right hand to handle the instruments (vice versa for the left-handed operator).

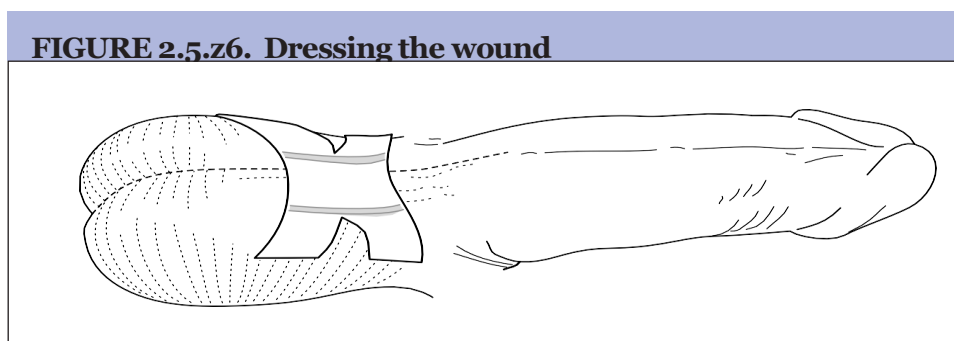
Still using the three-finger technique, tightly stretch the skin overlying the vas so that it is as thin as possible. Open the ringed clamp, and press the tips onto the vas through the puncture site. Lock the clamp around the vas and overlying sheath (*Fig. 34*). As with the right vas, use the “palm-up” approach to ensure that the instrument is applied perpendicular to the vas (90 degrees) (*Fig. 11, page 25*).

Occasionally, the sheath and underlying vas cannot be fixed with the clamp because of local edema. Insertion of the clamp into the scrotal tissue may increase the risk of both trauma and infection. However, if the vas is directly under the puncture hole, inserting the clamp into the scrotal tissue probably will not contribute to trauma and infection. If the operator probes for the vas with the ringed clamp inside the scrotum, the risk of trauma and infection probably increases.

Grasping the left vas and sheath directly with the ringed clamp can make vasectomy easier to perform, particularly when the scrotal skin is thick.

Follow the steps on pages 35 to 49 for delivering, elevating, and occluding the vas.

After both vasa have been occluded and returned to the scrotum, pinch the puncture site tightly for a minute, or ask the client to hold the gauze and apply pressure himself. Inspect for bleeding. If bleeding is present, hemostasis must be achieved. No skin sutures are necessary. Wash the small wound by swabbing with an antiseptic solution. A sterile gauze dressing can be held in place with a scrotal supporter or tape, or a Band-Aid can be used to cover the small wound. In *Figure 35 (page 52)*, note that the width of each end of the tape has been divided in half, allowing the tape to fit better on the round scrotum.



Men who have undergone vasectomy may leave the health facility after resting 30 minutes. If sedation has been used, monitor the client's vital signs every 15 minutes after surgery until they are stable.

Explain to the client in simple language how to care for the wound, what side effects to expect, what to do if complications occur, where to go for emergency care, and when and where to return for a follow-up visit. Tell him that minor pain and bruising are to be expected and do not require medical attention. The man should seek medical attention if he has fever, if blood or pus oozes from the puncture site, or if he experiences excessive pain or swelling. Give the man a brief, simply written summary of the instructions.

It is essential that the client be informed of the low likelihood (but the possibility nonetheless) of vasectomy failure. He may resume normal activities and sexual intercourse with temporary contraception within two to three days, if he feels comfortable. The client or his partners will need to use another method of contraception during the first 12 weeks following vasectomy to avoid an unplanned pregnancy. Every client should be offered the opportunity to have a semen analysis. Ideally, one or two sperm-free semen specimens should be obtained from the client after vasectomy to be reasonably sure that the operation has been a success.

No-scalpel vasectomy (NSV) simulated skills demonstration and practice under local anesthesia



Activity 2.5.3. Skill Demonstration

- Use the learning guide exactly as demonstrated previously the facilitators and that each participant will have a chance practice each role of the members of the team on the model under observation by the facilitators.
- Practice the NSV technique on both the right and left vas.
- Have one group member use the learning guide to lead the other participant, step-by-step, in the procedure.
- observe and give feedback during practice
 - Skill practice until the participants felt comfortable feeling competent

Time: 2 hrs.

Scrotal model practice facilitates the process of acquiring NSV surgical skills. By the time you perform your first NSV on a client, you will already be:

- Able to use the three-finger technique
- Comfortable handling the dissecting forceps and ringed clamp
- Confident in your basic skills

During the demonstration, the trainer will go over the steps needed to prepare a client for NSV, the steps needed to perform the procedure, and the steps to be followed after the procedure. To follow along with the demonstration (or to study this material independently), refer to the Learning Guide for NSV Clinical Skills (Chapter II-5F; see below) and to the steps and illustrations listed above.

After the demonstration, you will practice the VASECTOMY techniques on the scrotal model. Throughout the practice, your trainer will be available to answer your questions.

E. Supervised clinical and surgical practice



Activity 2,5.4 Guided clinical practice

- Practice:
 - (1) counseling,
 - (2) Preprocedural assessment,
 - (3) surgery,
 - (4) post procedure instruction and follow up tasks with rotation

The priority concerns during procedure/surgical observation and practice are ensuring the client's comfort and safety and providing a safe, effective procedure. Therefore:

- Participants who are observing an NSV procedure should not interfere with the work of the surgical team.
- You should hold questions and comments until after the procedure is completed and the client is no longer in the room.
- If a participant notices a complication or a break in the sterile technique that was unobserved by the trainer, that person is responsible for reporting the situation immediately in a way that does not alarm the client.
- If a complication arises during surgery, the trainer will be in charge of managing the situation and will complete the surgery.

Client-Support Highlights

During vasectomy clients will be awake and will be concerned about the success of the procedure

and about the amount of pain they might feel. The vasectomy service provider (and vasectomy assistant) can do several things to minimize the client's tension and maximize his comfort, which will contribute to the safe and efficient performance of the vasectomy/NSV.

- Some clients like to be informed of each step of the procedure, while many others prefer to be distracted.
- Inform the client that he might feel some discomfort and that it is essential that he does not move until the procedure is complete. Ask him to tell you if he feels any discomfort or pain. You could suggest that he squeeze the table instead of moving if he feels any pain. Pre you inject the local anesthetic or apply the ringed clamp, advise the client that he might feel some pressure.
- The vasectomy service provider (or another staff member) should monitor the client. Ask him how he is doing and determine that he is not experiencing any untoward reaction (such as vasovagal response).
- Pre, during, and after the procedure, be aware of the client's need for privacy and his concerns about modesty.

Infection Prevention Highlights

For the Procedure

- Scrub properly
- Vasectomy can be performed in an examination room; an operating theater is not required. But emergency equipment and drugs for management of intra-operative complications should be readily available.
- Clients can wear their own clothing if it is clean.
- Staff do not have to wear a cap, mask, or gown.
- Use instruments, gloves, and surgical drapes that have been sterilized
- Use a surgical technique that minimizes tissue trauma and controls bleeding.
- Maintain aseptic technique.

After the Procedure

•While still wearing gloves, dispose of contaminated wastes (gauze, cotton, and other waste items) in a covered, leak-proof container or plastic bag.

- Do not recap, bend, break, or remove a needle from the syringe Pre disposing of it.
- Dispose of the uncapped needle and syringe in a puncture-resistant, lidded container.
- Clean the operating table, instrument stands, lamps, floor, and other surfaces potentially contaminated during procedure using a cloth soaked with 0.5% Chlorine solution.
- Follow the guidelines to clean and process used (soiled) instruments, gloves, linens, needles, and syringes.
- Wash hands after removing gloves.

Supervised Surgical Practice

After your skills have been evaluated as satisfactory on the scrotal model and after you have observed at least one vasectomy procedure and assist at least one vasectomy you may perform an NSV procedure under the trainer's supervision.

Box II-2: Practice hints.

Practice Hints

- Depending on your prior surgical experience, after observing vasectomy procedure, you may assist the trainer in performing NSV then perform NSV with the trainer's guidance.
- Be patient with yourself. You are learning a new technique, and it will take repeated practice on the scrotal model and on clients before you feel comfortable with NSV.
- Frequent viewing of the video and extensive study of the technique.
- Continue scrotal model practice during this portion of your training to help you fine-tune your skills and help you correct problems you are having in surgical practice.
- During surgical training, the trainer is there to provide you with support and guidance. Ask questions and ask for help if needed, being careful not to cause the client any extra concern.
- After procedure, you will have time to review the case with the trainer and with other observers. The trainer will provide you with coaching, as needed.
- When you and the trainer determine that you are ready, the trainer will evaluate your performance using the NSV Clinical Skills Checklist.

	Summary Review the client's chart and verify informed consent just before the procedure Examine the client properly before the procedure Perform the NSV procedure as per the standard
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CHAPTER 15 : POST-VASECTOMY CARE and FOLLOW-UP

Time:30min

Chapter description

This chapter is designed to equip with knowledge and skill needed for post-vasectomy care and follow up

Primary Objectives

At the end of this chapter participants will be able to

- Demonstrate post-vasectomy care and follow up

Enabling Objectives:

At the end of this section participants will be able to:

- a. Describe the standard post procedure care and follow up for vasectomy.

Chapter outline

- | | |
|------|---|
| 15.1 | Immediate post vasectomy care and client instructions |
| 15.2 | Post vasectomy client follow-up |
| 15.3 | Summary |

15.1 Immediate post vasectomy care and client instruction



Activity 15.1: A Individual reflection

What are the postoperative instructions that should be given to the client following vasectomy?

5 minutes

Men who have undergone vasectomy may leave the clinic after resting 30 minutes. If sedation has been used, monitoring of vital signs should be monitored every 15 minutes during the first hour until stable and sedation has worn off.

Instruct the client how to care for the wound, how to use any after procedure/postoperative medications by telling him the following:

- If possible, put cold compresses on the scrotum for 4 hours to reduce swelling.
- There will be some discomfort, swelling, and bruising which should stop in 2-3 days.
- Rest for 2 days. Avoid heavy work or vigorous exercise for a seven days.
- Keep the incision clean and dry for 2-3 days. advise the client that he can use a towel to wipe

his body clean, but not soak in water.

- Wear snug underwear or pants for 2-3 days to help support the scrotum, which will help reduce the swelling, bleeding, and pain.
- Take Ibuprofen, paracetamol or another safe, locally available pain-reliever medication as needed. Avoid using aspirin ; which slow the blood clotting ability.
- What complications to look for and what to do about each of them.
- Return to the facility at once if the client experiences the following Warning Signs:
 - High fever
 - Bleeding or pus from the wound
 - Pain, heat, swelling, or redness at the incision that becomes worse or does not stop
 - If your partner misses a period or thinks she is pregnant
 - If you have any questions or concerns
- You are not immediately sterile and you need to use temporary contraception for the first 3 months following the procedure
- The client should not have sex for at least seven days after the procedure if it is not uncomfortable.
- Sexual **performance** unchanged. *(The first few times that you have sex, you may notice some blood or blood clots in your ejaculate.*
- *You may also have some pain. This is expected and does not indicate a problem unless it happens more than a few times.*
- *If pain during ejaculation persists after the first few times, you should consult your doctor.)*
- Vasectomy does not protect you or your partner from sexually transmitted infections (STIs), including HIV, which causes AIDS. You can reduce your risk of STIs by using condoms

15.1 Post vasectomy client follow-up



Activity 2.6:B Individual reflection

Instruction: Ask participants to reflect on the following question.

1. When should you advise the client to come back for a follow-up visit?
2. What are the tasks you need to accomplish during a follow-up visit?

5 minutes

Return for follow-up after 12 weeks for semen-analysis

Assure every client that he is welcome for follow up any time—for example,

- He has problems or questions,

- The partner thinks she might be pregnant.
- He has bleeding, pain, pus, heat, swelling, or redness in the genital area that becomes worse or does not go away
- If he feels that something is seriously wrong with his health

At the return visits: Take a history.

- Ask the client if he has any questions, concerns, symptoms to discuss
- Ask the client about his experience with the vasectomy
- Assess whether the client has resumed sex and if he and his partner are using contraception.
- **Perform a scrotal examination**
- Encourage the client to continue using contraception until 3 months has passed
- Where feasible, analysis of the seminal fluid can be performed.
- If results show azoospermia (no sperm), let the client know that he is now sterile
- If the semen continues to contain motile sperm, or nonmotile sperm more than 100,000/ml after six months the method must have failed and a second vasectomy procedure may be offered
- Inform the client that he can return at any time if he has questions or health problems.

NB: Remind the client that vasectomy does not provide protection against STIs including HIV. Encourage the client to use condoms if he may be at risk.

	15.3 Summary Provide proper post vasectomy instruction Conduct post vasectomy follow up perform post vasectomy semen analysis
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CHAPTER.16: COMPLICATIONS OF VASECTOMY: PREVENTION AND MANAGEMENT

Time:60min.

Chapter description

This chapter is intended for participants to equip with necessary knowledge to identify complications of vasectomy: prevention and management

Primary Objectives

At the end of this chapter participants will be able to

- Discuss complications related with vasectomy

Enabling Objectives:

At the end of this Chapter participants will be able to:

- Prevent potential complications in vasectomy/ NSV
- Identify and manage/refer clients with complications following vasectomy /NSV procedures.

Chapter outline

- | | |
|------|--|
| 16.1 | Vasectomy complications: prevention and management |
| 16.2 | Post vasectomy complications management |
| 16.3 | Summary |

16.1Vasectomy complications: prevention and management

Serious complications related to vasectomy are rare and most complications from vasectomy can be prevented. The most commonly reported complications are small hematomas and skin infections, which occur in rare occasions. The management of most potential complications is similar to that for other types of minor surgery.

Potential Complications of Vasectomy

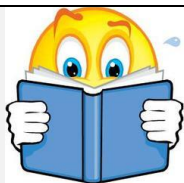
- Potential intra-procedural complications include vasovagal reaction (neuro- cardiogenic syncope), lidocaine toxicity, and injury to the testicular artery.
- Potential after/post procedural complications include bleeding, hematoma, infection, sperm granuloma, chronic testicular pain, infectious and congestive epididymitis, pregnancy in the client's partner, and vasectomy failure.

Prevention of Vasectomy-Related Complications

Most vasectomy-related complications can be prevented by:

- Carefully screening clients
- Following proper infection prevention practice
- Using gentle surgical technique
- Achieving hemostasis during surgery
- Ensuring that clients understand instructions for post procedure care
- Verifying that client understand the need for post vasectomy contraception

16.2 Post vasectomy complications management



Activity 2.7.A

Group work/Reading assignment

Instruction

Read potential intra procedure or post procedure complications and their management: (*Slides Chapter 2.7*)- Direct participants to Tables II-4 and II-5, Tell them that

1. Intraoperative complication
2. First part of postoperative complications (bleeding, hematoma, infection, sperm granuloma)
3. Second part of postoperative complications (chronic testicular pain, infectious and congestive epididymitis, pregnancy and vasectomy failure)

Time 35 min

Table II-7a: Management of Intra procedure Complications

	Vasovagal Reaction (neuro- cardiogenic syncope)	Lidocaine Toxicity	• Injury to • Testicular Artery
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Symptoms	• Fainting • Nausea • Weakness • Lightheadedness • Blurred vision • Sweating • Decreased blood pressure • Initially increased heart rate,	Numbness of tongue & • mouth • Lightheadedness • Tinnitus (ringing in the ears) • Visual disturbances • Slurred speech • Respiratory depression • Respiratory arrest • Myocardial depression • Arrhythmia • Hypotension	• Bleeding observed in fascia around the vas
Treatment	Reassure the client • Raise the client's feet • Lower the client's head • Administer atropine if the client's pulse is lower than 40 • Administer oxygen	• Discontinue use of the drug • Take general supportive measures • Maintain airway and respiration • Provide oxygen • Administer diazepam or thiopental (for convulsions) • Administer vasopressors (e.g., norepinephrine or dopamine) for hypotension	• Perform cautery or ligation to control bleeding

Prevention	• Use gentle surgical technique • Perform effective anesthetic block • Explain procedure to the client in advance • Reassure the client during	• Do not administer a dose • >30 cc of 1% solution or • >15 cc of 2% solution	• Strip fascia and blood vessels carefully - Understanding and carrying post procedure instructions
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Table II-7b: Potential Postoperative Complications of Vasectomy part 1

	• Bleeding	Hematoma	• Infection	Sperm Granuloma
Symptoms	•	Swelling of scrotum	• Pus, swelling, or pain at the incision site or in the scrotum • Fever	• Pain at the testicular end of the vas or the tail of the epididymis Nodule felt during palpation
Treatment	• Most	• Control	• Superficial	Asymptomatic:

t	small vessel bleeding can be controlled by compression • Cautery and ligature may be used for large vessel bleeding	bleeding by pressure • Cautery and ligature may be used for large vessel bleeding • Rarely, hematoma may require incision and drainage • If hematoma is stable, allow to resolve on its own Provide	infections: • Clean and apply local antiseptic and clean dressing • Underlining tissue infection: administer antibiotics and provide wound care • Access: administer antibiotics, perform drainage, and practice wound care • Cellulitis or fasciitis: perform debridement, administer antibiotics, and practice wound care	no intervention needed • Pain: use non-steroidal analgesics • Persistent pain evacuate the cyst: cut and seal the vas $\frac{1}{4}$ inch toward the testis • Do not excise the granuloma Rarely, chronic pain warrants an epididymectomy
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		prophylactic antibiotics		
Prevention	- Careful surgical technique - Understanding and carrying post procedure instructions	- Careful surgical technique - Understanding and carrying out of post vasectomy instructions Rearrange ligation and cautery	- Observance of proper infection prevention procedures - Reorganization and control of bleeding - Client's keeping the wound dry after vasectomy - Proper tissue handling	Leave open the testicular end of the vas
Etiology (possible reasons)	- Vasectomist's failure to strip spermatic cord vessels from the vas before transection - Vasectomist's failure	- Rough handling of tissue - Vasectomist's failure to control bleeding before wound closure - Excessive strain or	- Failure by vasectomist to follow infection prevention procedures - Unrecognized or untreated hematomas - Improper postoperative care of the wound by vasectomist or	Occlusion of vas leads to accumulation of sperm

	to control bleeding before wound closure	heavy lifting by client after vasectomy Clients' failure to wear sung (very tight under wear) undergarm ents after vasectomy Clients' failure to rest for 2 -3 days after vasectomy	client	
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Figure 11.7 C post operative Complication's part 2

	Chronic Testicular Pain	Infectious and Congestive Epididymitis	Pregnancy in the Clients Partner	Vasectomy Failure
Symptom	- Chronic unilateral or bilateral pain in the scrotum without palpable abnormality - Swelling Pain during intercourse or	- Fever(if caused by infection) - Scrotal pain - Swelling - Induration	Client's partner's pregnancy	Semen analysis shows sperm

	strenuous activity			
Treatme	• Administer non-Osteroidal analgesics • Pain may gradually subside spontaneously • Provide antibiotics • Perform spermatic cord blocks If the above fails, vasectomy reversal or denervation of the spermatic cord may be helpful	• Encourage bed rest • Elevate the scrotum • Administer ice packs • Provide non-steroidal analgesic • Offer antibiotics • Take pus after pain and swelling	Determine the reason for the pregnancy by: • Estimating the date of conception • Asking if the couple had unprotected intercourse for the 12 weeks after the vasectomy • In confidence, asking the partner if she has had intercourse with another man • Offering semen analysis Referring the couple to further counseling or antenatal care	• Explain to the couple how the failure could have occurred Offer to repeat the vasectomy procedure

Preventi	Unknown	Infectious epididymitis: • Following infection procedures • Screening clients for STIs Congestive epididymitis • proper tissue handling in infection prevention section	• Instructing the client to use contraception before vasectomy and during the postoperative period For vasectomy failure Careful surgical technique	Careful surgical technique
Possible	Poorly understood possibly caused by: • Neuroma or perineural irritation • Nerve entrapment • Epididymal congestion with sperm • Infection • Sperm granuloma formation Back pressure	Infectious epididymitis: • Failure to follow infection prevention procedures • Sexually transmitted pathogens • Congestive epididymitis • Pressure on epididymis resulting from sperm blockage :	• Pregnancy before the vasectomy • Unprotected intercourse at any time up to 12 weeks after vasectomy • Vasectomy failure • Partner's sexual activity with a man other than the client	• The vasectomist's failure to properly occlude the vas • Spontaneous recanalization

	induced rupture of epididymal tubules			
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Table 11-7D Complications continued

	Summary Serious complications related to vasectomy are rare Most complications from vasectomy can be prevented If Complications happen, need careful management and close follow up
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Annexes

Annex I;LEARNING GUIDE FOR INTERVAL MINILAPAROTOMY CLINICAL SKILLS

This is a learning tool for trainees/participants on the standard interval Mini laparotomy clinical skills for bilateral tubal ligation. The trainee/participant uses the learning guide as a tool to practice on anatomic models, rate his/her performance of each step during simulated and clinical practice; and even as a job aid upon return to the workplace. (Mark the top of the column accordingly – **M** for **Zoë Model** and **C** for **client** practice). *This learning guide presupposes that the client has been counseled using the REDI framework, decided to have bilateral tubal ligation, undergone pelvic assessment to determine eligibility and signed the informed consent form.*

In order to provide quality mini laparotomy service, trainees need to perform each step correctly. (Trainees should continue to improve until they score 2 in each step).

Use the following rating scale (0, 1 or 2):

☐ **2** - **Competently performed:** Step or task performed correctly and in proper sequence

☐ **1** - **Needs Improvement:** Step or task performed correctly but out of sequence

☐ **0** - **Not done or done incorrectly:** Step or task omitted or not performed correctly

PARTICIPANT _____

Course Dates _____

CHECKLIST FOR INTERVAL MINILAPAROTOMY CLINICAL SKILLS					
STEP/TASK	CASES				Remark
1. Ensures that she has been appropriately counseled for TL by minilaparotomy and verifies informed consent					
2. Describes the procedure and what to expect.					
3. Gives the client analgesia and/or sedation (If IV drugs are selected, administers in the operating room)					
4. Asks client to empty her bladder just prior to entering					
PRE-PROCEDURE STEPS – OPERATING ROOM					
CHECKLIST FOR INTERVAL MINILAPAROTOMY CLINICAL SKILLS					
STEP/TASK	CASES				R
5. Opens sterile instrument pack/container for insertion of					
6. Monitors client's vital signs at the beginning of the procedure, during the procedure and at the end					
PROCEDURE INSERTING THE UTERINE ELEVATOR					
7. Washes hands thoroughly with soap and water and dries with clean, dry cloth or air dries					
8. Puts sterile glove on both hands					
9. Inserts speculum, visualizes the cervix and cleans the cervix and the vagina with iodine solution 2 times					
10. Grasps the cervix with the tenaculum and passes the uterine elevator through the vagina, into the cervix up to the cervical guard (Note: Using tenaculum is optional)					
11. Removes the tenaculum and speculum leaving the uterine elevator in place, and then removes the glove.					
PREPARING THE ABDOMEN					
12. Scrubs hands, dries with sterile towel, or washes hands with soap and water and then applies alcohol					
13. Puts on sterile surgical gown and sterile glove					

14. Prepares the abdomen with iodine solution twice. Cleans wide area starting from the operative site.					
15. Drapes the operative area using 4 drapes or one fenestrated drape, leaving the uterine elevator under the					
16. Continues to communicate with the client throughout the procedure.					
INFILTRATING WITH LOCAL ANESTHESIA					
17. Draws local anesthetic (15-20ml 1% lidocaine without epinephrine), determines the placement of the abdominal incision and Infiltrates each layer					
CHECKLIST FOR INTERVAL MINILAPAROTOMY CLINICAL SKILLS					
STEP/TASK	CASES				
					R
18. Waits 2 minutes for the anesthetic to take effect and					
ENTERING THE ABDOMEN					
19. Incises the skin 2 -3 cm above the pubic symphysis transversely and bluntly dissects the subcutaneous					
20. Exposes fascia using the two retractors, maintains the retractors horizontally throughout the wall opening					
21. Makes a nick in the fascia, in the middle of the incision and extends the fascial opening on both sides					
22. Inserts the retractors to separate the rectus muscle and expose the peritoneum					
23. Places operating table in Trendelenburg position					
24. Slightly elevates the peritoneum with artery forceps and confirms that it is translucent so that the abdominal contents are not sticking to it					
25. Makes a small opening in it with scissor, checking the underlying structures to ensure that bowel or bladder is not entered or injured					
26. Extends the peritoneal incision, replacing retractors inside the abdomen gently					

27. Holds the retractors horizontally and simultaneously pulls them up					
ACCESSING AND OCCLUDING THE TUBES					
28. Gently presses the handle of the uterine elevator downward to bring the fundus of the uterus upward toward the incision site and closer to the abdominal wall					
29. Drips 1-2 ml of 1% lidocaine on the uterus fundus and on each fallopian tube through the incision that is being held open with retractors					
30. With the hand that is not holding the uterine elevator, gently slides the tubal hook around the uterine fundus to one side of the uterus towards the anterior wall and then					

CHECKLIST FOR INTERVAL MINILAPAROTOMY CLINICAL SKILLS					
STEP/TASK	CASES				
					Remark
hook horizontally and out through the incision. Instructs the client also to relax and pull inward her abdomen.					
31. Grasps the tube with baby Babcock forceps atraumatically and confirms the tube by following the tube and locating the fimbriated end					
32. Holds the tubal loop with baby Babcock forceps and ties the tube using absorbable suture (0 atraumatic catgut)					
33. Cuts the upper portion of the loop above the ligature, leaving					
34. Inspects the tubal stump prior to cutting the ligature to be sure that there is no bleeding, then cuts the suture and gently returns the tube to the abdomen					
35. Accesses, delivers and occludes the second tube					
CLOSING THE WALL					

36. Closes the fascia with number 0 absorbable suture, then the skin with absorbable or non-absorbable suture					
37. Dresses the closed incision					
38. Carefully removes the uterine elevator					
POSTOPERATIVE TASKS					
39. Disposes of gloves and waste materials such as cotton balls or gauze by placing them in a leak proof container or					
40. Washes hands thoroughly with soap and water and dries with clean, dry cloth or air dries.					
CLIENT RECOVERY					
41. Provides post procedure instructions and discharges after up to two hours of observation					

AnnexII: Learning guide for vasectomy/no-scalpel vasectomy (vasectomy) clinical skills

This is a learning tool for trainees on the standard No-Scalpel Vasectomy (VASECTOMY) procedures. The trainee uses the learning guide as a tool to practice on anatomic (scrotal) models, rate his/her performance of each step during simulated and clinical practice; and even as a job aid upon return to the workplace. (Mark the top of the column accordingly – **M** for **Scrotal Model** and **C** for **client** practice). *This learning guide presupposes that the client has been counseled using the REDI framework, decided to have vasectomy, undergone assessment to determine eligibility and signed the informed consent form.*

In order to provide quality vasectomy service, trainees need to perform each step correctly. (Trainees should continue to improve until they score 2 in each step).

Use the following rating scale (0, 1 or 2):

☐ **2** - **Competently performed:** Step or task performed correctly and in proper sequence

☐ **1** - **Needs Improvement:** Step or task performed correctly but out of sequence

☐ **0** - **Not done or done incorrectly:** Step or task omitted or not performed correctly

PARTICIPANT _____ Course Dates _____

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (VASECTOMY): <i>CLINICAL SKILLS</i>					
STEP/TASK	CASES				
					REMARK
PRE-PROCEDURE STEPS – Pre-procedure Room					
1. Greet client politely, offer a seat, introduce yourself and ensure privacy for examination					
2. Ask client if he still wants the vasectomy					
3. Review with the client information in his record and review reproductive health and pertinent general medical history with client • Verify absence of any acute illness (malaria, diarrheal disease) or local scrotal infection by history. • Review physical exam in record.					
4. Ensure that the client has been appropriately counseled for vasectomy; verify informed consent, ask client what questions he has about the procedure.					

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (VASECTOMY): *CLINICAL SKILLS*

STEP/TASK	CASES				
					RE M AR K
5. Ask the client to void.					
6. Put on your surgeon's wear (mask, cap and surgeon's shoes) Pre you go to procedure room.					
PRE-PROCEDURE STEPS – Procedure Room					
7. Ensure that the room is warm enough to relax the client's scrotum.					
8. Help the client onto the examination/operating table.					
9. Place the client in the appropriate position					
10. Communicate with the client; tell him what will be occurring Pre it happens and what he can expect to feel. Explain to the client what you are doing at each step; ask him to tell you if he experiences discomfort; remind him to take deep breaths and relax.					
11. Secure penis at 12 O'clock position					
12. Ensure that needed instruments, supplies and equipment are available in the procedure room (see separate list).					
13. Wash hands					
14. Examine the procedure/operative site to ensure that spermatic cords are mobile					
15. Ensure procedure/operative site is clean and clip hair at operative site (if necessary).					
16. Perform surgical scrub (using soap and water) and dry with sterile towel.					
17. Put on surgical gown and sterile gloves.					
18. Set your instrument tray; open the vasectomy set without touching the inner side; prepare a sterile syringe to administer 10 cc 1% lidocaine (without epinephrine), arrange the instruments in the sequence that you need them,					

including some sterile gauze.					
19. Prepare the procedure/ operative site with iodine solution at least twice. Clean a wide area starting from procedure /operative site and including the underside of the scrotum, suprapubic area and upper thigh.					
20. Open the surgical drape case and drape the client.					
21. Isolate the procedure/operative site (scrotum) with fenestrated sterile sheet(s) or drape(s), pulling the scrotum out through the small opening					
LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (VASECTOMY): CLINICAL SKILLS					
STEP/TASK	CASES				
					RE MA RK
22. Keep communication with your client, or ask assistants to do so through the rest of the procedure.					
INFILTRATING WITH LOCAL ANESTHETIC					
23. While standing on the right side of the client, facing client's face and using left hand, identify, isolate and fix the right vas under the median raphe midway between the base of the penis and the top of the testicles. Trap the right vas firmly using the three-finger technique.					
24. Raise a skin wheal injecting 1 cc of lidocaine.					
25. Advance the needle parallel to the right vas within the external spermatic fascial sheath towards the inguinal ring full length (~ 4 cm). Aspirate to ascertain that the needle is not in the blood vessel. Without withdrawing the syringe and keeping the vas fixed as in the beginning, slowly inject 3-5 cc of lidocaine. Then remove the needle.					

26. Still standing on the right side of the client, this time facing client's feet and again using the left hand, identify, isolate and fix the left vas underneath the injection puncture using the three-finger technique. Reintroduce the needle through the puncture. Advance the needle in the left external spermatic fascial sheath toward the inguinal ring about 4 cm above the wheal; aspirate and inject 3-5 cc of lidocaine into the sheath. Then remove the needle.					
27. Pinch the skin wheal between the thumb and forefinger to reduce local edema, and wait 3-5 minutes for anesthesia to take effect.					
<i>If client feels pain after the start of surgery, repeat injection following the same step without raising the skin wheal again, up- to a maximum dose of 15 cc. For detailed description and illustration on how to give the local anesthesia, see the illustrated guide for VASECTOMY..</i>					
DELIVERING AND OCCLUDING THE VAS					
28. Fix the right vas again under the skin wheal, with your left hand using the three-finger technique.					

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (VASECTOMY): <i>CLINICAL SKILLS</i>					
STEP/TASK	CASES				
					REMARK
29. Apply upward pressure with your middle finger under the scrotum; press the open tips of the ringed clamp onto the skin at the skin wheal overlying the vas; grasp the right vas, applying the clamp at a 90° angle perpendicular to the vas, with your palm facing upwards; lock the clamp to the first notch					
30. With your left hand, lower the handles of the ringed forceps to elevate the vas.					
31. Press the index finger of your left hand lightly downward to tighten the scrotal skin just ahead of the tips of the ringed clamp and over the anesthetized area.					
32. Use a quick, sharp, single movement to pierce the skin down to the vas lumen with the medial blades of the forceps I the same puncture hole, to the same depth down the vas.					
33. Withdraw the medial blade of the dissecting forceps. Close the blades of the forceps, insert both blades of the forceps in the same puncture hole, the same depth down the vas.					
34. Gently open the blades of the dissecting forceps spreading the tissues transversely across the vas, to create an opening twice the diameter of the vas.					
35. To deliver and elevate the right vas, pierce the wall of the vas with the tip of the lateral blade of the dissecting forceps (or hold the dissecting forceps in line with the long axis of the vas and grasp bare vas directly), rotate the handle of the dissecting forceps clockwise 180° so the tips face upward.					
36. To deliver a loop of the vas, slowly release the ringed clamp with the left hand, thus allowing the rotated forceps to elevate the vas the puncture hole.					
37. Strip away sheath and blood vessels from the vas. Ligate the prostatic end of the vas.					

LEARNING GUIDE FOR NO-SCALPEL VASECTOMY (VASECTOMY): CLINICAL SKILLS					
STEP/TASK	CASES				REMARK
38. Cut one end of the suture about 2-3 mm from the knot, leaving a single uncut end of about 5-7 cm in length.					
39. use open ended vasectomy-leave the testicular end opened of the vas about 1.5 cm from the prostatic end ligature and leave both end of the suture to about 5-7 cm in length.					
40. Exercise up to 1 cm of the vas .					
41. Ensure hemostasis.					
42. Cut both ends of the testicular suture, leaving about 2-3 mm.					
43. Gently pinch and pull up on the scrotum with the thumb and index finger to allow both ends of the vas drop back into their original positions in the scrotum.					
44. Very gently pull the long suture of the prostatic end of the vas to re-expose the cut end of the vas, which will be covered with fascia.					
45. Gently grasp and hold the fascia of the spermatic cord with the tip of the dissecting forceps and tie the fascial membrane at about 2 to 3 mm below the tie at the prostatic end.					
46. Cut the suture and allow the stump to drop back into its original position in the scrotum.					
47. Pull slightly the prostatic end again up to the puncture wound and cut the single long end of the suture.					
48. Using the three-finger technique, isolate the left vas under the puncture site.					
49. Grasp the left vas at the lower end of the puncture site with the ringed clamp.					
50. Repeat steps 29-48 for the left vas.					
51. Inspect for bleeding.					
52. Apply Band-Aid, dividing at both ends for better four points holding to cover the small wound. Tell the client you have finished with the procedure and comfort him.					
Post-procedure Tasks					
53. Dispose of waste materials such as cotton balls or gauze by placing them in a leak proof container or plastic bag and					
54. Remove gloves by turning them inside out gently.					
55. Wash hands thoroughly with soap and water and dry with clean, dry cloth or air dry.					

56. Provide post procedure instructions: • Instruct the client on the wound care and reason for immediate return (Swelling, Bleeding or infection) • Remind him of the lack of protection against pregnancy for three months and the need to use another reliable method; If his spouse is on some contraceptive method, she may continue the same for three months; and ask him to return after three months for semen analysis. • Instruct him to wear tight underpants, not to engage in cycling horse riding, and strenuous exercises for first week. However, ask him to resume routine activity as soon as he is comfortable, which could be the next day.					
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Annex III: Informed Consent Form for tubal ligation Clients

I -----the undersigned, request that a tubal ligation via (client’s name) be performed on my person. I make this request of my own free will, without having been forced, pressured, or given any special inducement.

I understand the following:

- 1. There are temporary methods of contraception available to my partner and me.
- 2. The procedure to be performed on me is a surgical procedure, the details of which have been explained to me.
- 3. This surgical procedure involves risks, in addition to benefits, both of which have been explained to me.
- 4. The procedure should be considered permanent. However, no surgical procedure can be guaranteed to work 100% on all people. There is a small failure rate. If the procedure is successful, I will be unable to have any more children.
- 5. This surgical procedure will not protect me and my partner from sexually transmitted infections (STIs), including HIV (the virus that causes AIDS).
- 6. I can decide against the procedure at any time before the operation is performed (and no medical, health, or other benefits or services will be withheld from me as a result).

-----	-----
Signature or mark of the client	Date
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Signature of attending physician or delegated assistant Date If the client cannot read, a witness of the client’s choosing, of the same sex and speaking the same language, must sign the following declaration:

I, the undersigned, attest to the fact that the client has affixed his/her thumb print or mark in my presence.

-----	-----
Signature or mark of witness	Date

Annex

Box II-1: Model Informed Consent Form for Vasectomy
(See sample Informed consent form below; Box II-1).

Model Informed Consent Form for Vasectomy*

I _____, the undersigned, request that a vasectomy be performed (*client's name*) on my person. I make this request of my own free will, without having been forced or given any special inducement. I understand the following:

- 1. There are temporary contraceptive methods available to me and my partner.
- 2. The procedure to be performed on me is a surgical procedure, the details of which have been explained to me.
- 3. This surgical procedure involves small risks, in addition to benefits, both of which have been explained to me.
- 4. If the procedure is successful, I will be unable to have any more children.
- 5. The effect of the procedure should be considered permanent.(not reversable)
- 6. The procedure does not protect me or my partner from infection with sexually transmitted infections, including HIV/AIDS.
- 7. I can decide against the procedure at any time Pre the procedure / operation is performed (without losing the right to medical, health, or other services or benefits).

(Signature or mark of client)

(Date)

**(Signature of attending doctor
or delegated assistant)**

(Date)

If the client cannot read, a witness of the client's choosing who is of the same sex and who speaks the same language as the client must sign the following declaration: I, the undersigned, attest that the client has affixed his thumbprint or mark in my presence.

(Signature or mark of witness)

(Date)

If the client cannot read, a witness of the client's choosing who is of the same sex and who speaks the same language as the client must sign the following declaration: I, the

undersigned, attest that the client has affixed his thumbprint or mark in my presence.

(Signature or mark of witness) *(Date)*

Annex V

Facility, equipment and necessary supplies requirements

Facility requirements

The following criteria should be considered when evaluating a facility for early infant male circumcision: • Preferably close to maternal, neonatal and child health (MNCH) services;

6Facility meets standards for universal precautions;
• Facilities to wash/clean hands;
• A clean room with good lighting (a theatre setting is not required);
• Ability to perform postoperative processing;
• Resources for contaminated waste disposal;
• Health-care workers trained to perform early infant male circumcision;
• Health-care workers trained in caring for postoperative circumcision wounds and recognizing and treating complications of early infant male circumcision;
• Access to care for routine follow-up and post-procedure emergencies.

Equipment requirements and necessary supplies

The following items must be immediately available and routinely checked before beginning any case in order to optimize safety during standard early infant male circumcision.

Equipment

• Secure work surface (table or infant warmer) – height should be such that the surged have to stoop or bend
• Assistant or mechanism to restrain/position infant
• Hand-washing/cleaning facilities

• Light source Supplies
• Infant padding, blankets and towels
• Clean nappies/diapers and wipes
• Sterile gloves
• Sterile drape with small opening in the centre (fenestrated)
• Betadyne or other skin-sterilizing preparation 10
• Sterile marking pen or gentian violet
• Sterile 2 x 2 or 4 x 4 gauze pads
• White petrolatum (Vaseline) or white petrolatum gauze Instruments
• Instrument tray wrapped with sterile drape
• Three small mosquito haemostats, two curved and one straight
• Small straight scissors
• Desired male circumcision device (Mogen, Gomco, Plastibell) and all appropriate parts
• Scalpel – no. 10 blade or similar Anaesthesia administration
• 1% lidocaine (WITHOUT EPINEPHRINE)
• 1-ml sterile insulin syringe with small 27-gauge or similar needle (27Gx5mm)
• Alcohol wipes Post-circumcision bleeding
• Topical epinephrine
• 5-0 or 6-0 absorbable suture (chromic or catgut) on a needle (6-0 chromic on PC-3 equivalent)
• Needle-holder
• Petrolatum-coated gauze

ANNEX VI: Case studies and role plays on TL

Role Play Scenario 1. Medical Eligibility Criteria for Client is interested in Tubal Ligation

Tubal Ligation Scenario 1—Client Information Sheet	
Client Description	
You are a 31-year-old female who is married to a 35-year-old man. You have four children and as a couple do not want to have any more children. You have been using an implant for the last two and a half years and have been happy with it, but now it will need to be replaced soon. A provider at your local clinic gave you a pamphlet on family planning options and suggested you discuss permanent options with your partner since you don't want any more children. by a nurse at the antenatal clinic. You are interested in exploring female sterilization and are now visiting the family planning clinic with your husband.	

Role Play Scenario 2—Client is interested in and is not yet eligible for tubal ligation

Tubal Ligation Scenario 2—Client Information Sheet	
Client Description	
You are a 31-year-old woman who works full-time. You have been married for 8 years, and you and your husband have two children. He is currently unemployed and your family is having some financial hardship because of this. You had previously talked about having three children, but can't afford to have another child right now because of your financial problems. You are using COCs right now but last month your menses was a few days late and you were very concerned that you were pregnant, though this proved not to be the case. This made you think about how difficult having another child would be right now. You mentioned this to a friend who told you how effective female sterilization was at preventing pregnancy. You have now come to the family planning site to learn more about the method and possibly to have the procedure.	

Role Play Scenario 3—Client is interested in but not eligible for female sterilization

Tubal ligation Scenario 3—Client Information Sheet

Client Description

You are a 20-year-old woman who is unmarried and has never been pregnant. You are a full-time student and are excited about additional schooling and your eventual work. You are not in a relationship but have had casual boyfriends in the past. You are not sure if you ever want to get married, and do not think you want to have children. Your friend recently got pregnant and had to leave school, and you are very worried this could happen to you. You’ve heard about female sterilization from a family planning brochure and come to the family planning clinic to find out more.

Tubal ligation Case Studies (Medical Eligibility Criteria and Post-Operative)

CASE 1

W/o T is 37 years old (para 5+0); her last delivery was three years ago. She is married and has been using the IUD since her last delivery. She is currently menstruating and complains of some lower abdominal discomfort and heavy bleeding. She is a known hypertensive patient who is being followed up at the district hospital. However, she has not returned for follow-up at the district hospital for the past year; she gives several reasons for her nonattendance. She continues to take medication for hypertension. She is interested in female sterilization. Her spouse is in agreement with the decision to use a permanent family planning method. Her blood pressure at the time of the visit to the family planning clinic was 160/130 mmhg.

Category: what category of MEC that the client

What are the reason:

What is the Management:

CASE 2

Miss T is 28 years old (para 4+0). Her last delivery was four months ago. All of her deliveries were by cesarean section. She has not had her period and is currently breastfeeding. Her older children are doing well. The couple have discussed and made a decision that they want female sterilization. Upon her discharge from the postnatal ward, she was advised to visit the family planning clinic. At the clinic, the couple were referred directly to the minilaparotomy theater

for counseling and the procedure.

Category: In what category The client can be classified

What is the reason:

What is Management:

CASE 3

w/oK is 35 years old (para 3+0); her last delivery was four years ago, and she is using Depo-provera for family planning. She has not had her menses for the last six months. Her last injection was given three months ago, and she is currently due for another injection. However, last week, when she went for the injection at the family planning clinic, she also complained of excessive thirst, frequency in urination, and generalized weakness. She was diagnosed as having diabetes mellitus and was referred for review by the medical doctor at the hospital. The doctor reviewed her case and prescribed some medications that were not in stock at the hospital. She has purchased the drugs from a private pharmacy. Cynthia was also informed that her blood pressure was moderately high and that the prescribed medication would also control her blood pressure. She is currently visiting her husband at his workplace. She has decided to visit the family planning clinic at the regional referral hospital for a tubal occlusion and also visit the medical clinic for a check-up (or a second medical/specialist opinion). She has told the family planning clinic staff that she wants the tubal occlusion before she visits the medical clinic. Her blood pressure is 130/90 mmHg. A random blood sugar evaluation has not been done.

What Category:

What is the Reasons:

Management:

CASE 4

W/Ro A is 39 years old (para 4 +0). Her last delivery was two years ago. All of her children are doing well. She is currently menstruating. The couple have been using male condoms. They have made a decision to have female sterilization. Salma does not have any other medical problem, apart from what she refers to as being overweight. Her main purpose for coming to the mobile outreach camp was to seek tubal occlusion as a method

of family planning. On examination, she is judged to be obese (weight 80 kg, height 150 cm); her blood pressure and other vital signs reveal no anomalies.

Under which MEC Category:

Reasons:

How do you Manage the client:

CASE 5

Ms C is 25 years old (para 2+1). Her last delivery was three years ago. She is currently on highly active antiretroviral therapy and antituberculosis treatment. She is married, and her husband is also HIV-positive. They are currently using the male condom. Her last menses was two months ago; it has been irregular. The couple have decided that they need an effective and permanent method of family planning. On her last visit to the medical clinic, she asked the clinic staff to assist her in obtaining the family planning method of her choice, which is female sterilization. She has been referred to the minilaparotomy theater for the procedure.

Category:

.Reasons:

Management:

ANNEX VII: Case studies on Vasectomy

Vasectomy: Case Study

Case Study 1- Mr. G is a 40-year-old married man with two children. He is currently attending the health clinic for depression. He recently asked his wife to go to the clinic for female sterilization. After some discussions with his wife, he opted to have vasectomy instead. The next day, they visited the facility and requested vasectomy.

1. How will you determine Mr. A's eligibility for vasectomy?

Case Study 2- Mr. C is a 45years old married man with four children. He wishes to have a vasectomy. At the time of this visit to the facility, he has no complaint. He reports that he has never suffered from any chronic medical illness and has not had surgery. On examination, the client is found to be in good general condition. The genital examination reveals nothing except that the provider can palpate only one testis in the scrotal sac and there are several small and ill-defined masses in the left and right sides of the groins

1. What is your impression?

2. Into what MEC category would you classify this man?

3. What is the recommended course of action for this client?

Case Study 3- Mr. T is a 50-year old client with a history of hypertension. He is married and has 6 children. He has no other medical problem. His blood pressure is well-controlled with antihypertensive. He wants a vasectomy.

1. What additional information would you want from the history and physical examination?

2. If nothing significant emerges from his medical history and physical examination into which MEC category would you classify this man's condition?

3. What is the recommended course of action for this client?

Case Study 4- Mr. D is a 45-year old man, who is married to three wives and has 12 living children. He has opted to have a vasectomy. He complains of chest pain and a productive cough over the last three days.

1. What additional information would you require from the history and physical examination to determine eligibility?

2. Which MEC category would you classify the condition this man has?

3. What is the recommended course of action for the client?

Case Study 5 Mr. Y is a 35-year old man. He is unmarried and has no children. He was recently diagnosed with hypothyroidism and is currently doing well on medication for

the condition. He does not have any other complaints and he has not suffered from any other major illnesses in the past. He has come to the FP clinic for a vasectomy

1. What additional information about the client would you want to have?

2. What is the recommended course of action for this client?

Applied Learning Case Studies

Case

Read the case and answer the questions.

Mr. x is a 35-year-old man married to a 27-year-old woman. They have had five children. The last child is 3 years old. The wife has been using injectables for contraception. The couple feel that they have achieved their desired family size. They recently were visited by a community health worker, who discussed health and related issues, including family planning methods. They shared their intentions to adopt a permanent method of contraception. The couple also decided to visit the nearest family planning clinic for more information about permanent methods of contraception. This particular clinic has several staff, including one trained clinical officer who can perform both tubal ligation and vasectomy.

At the clinic they were well received and counseled. During the counseling Chapter, the couple opted for male sterilization. The couple also made a voluntary and informed decision to have an HIV test. The results of the test both Mr. x and his wife were HIV-negative. The wife was due to receive a Depo-Provera injection and asked to receive it, which the provider did as they awaited the vasectomy procedure.

In the evaluation, Mr.x also gave a history suggestive of an inguinal hernia, a condition

a) Should the provider book the client for vasectomy at the clinic? Why or why not?

b) What are the key points on vasectomy that the health care provider should share with the couple during counseling that was confirmed on physical examination.

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