

***Reference Manual* for Minilap Tubectomy**

NOVEMBER 2009



**Family Planning Division
Ministry of Health and Family Welfare
Government of India**

Reference Manual
For
Minilap Tubectomy



सत्यमेव जयते

Family Planning Division
Ministry of Health and Family Welfare
Government of India
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Ministry of Health & Family Welfare

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FOREWORD

One of the immediate objectives of the National Population Policy is to address the unmet need for contraception to bring down the Total Fertility Rate to 2.1 by 2012. As per DLHS –III the unmet need for limiting method is 14.2% and 12.1% in rural and urban areas respectively.

In order to address this need, GOI has adopted a “Fixed Day Static” approach for providing quality sterilization services throughout the year at all peripheral health facilities. Despite all the efforts, the unmet need for limiting method of contraception remains high. This unmet need is mainly due to the lack of availability of trained service providers at peripheral health facilities. Since the launch of National Rural Health Mission in 2005, there has been strengthening of the infrastructure at the peripheral level facilities; the number of institutional deliveries has also increased significantly, thus providing an opportunity for Post-partum sterilization.

This reference manual on “Minilap Tubectomy” has been prepared with the objective to develop skills of Medical Officers to perform Minilap tubectomy in a standardized manner across the country. This will also empower the system by increasing the provider base at all the facilities to deliver quality sterilization services. The efforts of the Family Planning Division in developing this manual which can be used for training the medical officers in the minilap tubectomy are greatly appreciated.

I hope this manual will go a long way in providing quality Minilap Tubectomy services at all facilities.

(P.K. Pradhan)

Healthy Village, Healthy Nation



एड्स - जानकारी ही बचाव है
Talking about AIDS is taking care of each other



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ACKNOWLEDGEMENT

Female Sterilization is one of the most accepted methods of contraception in India and is conducted either by Minilap or Laparoscopic method. There is persistent high unmet need for limiting method of contraception which is mainly due to the lack of availability of trained medical officers at the peripheral health facilities. This issue could be addressed by increasing the provider base at these facilities by training Medical officers to perform Minilap Tubectomy on regular basis throughout the year.

Though Minilap Tubectomy is being performed for quite some time, there is a need to standardize the surgical technique for ensuring uniformity and quality of the service. This manual on Minilap Tubectomy has been prepared for standardizing the procedure and updating the knowledge and surgical skills of the Medical officers.

The development of the manual has been made possible due to the contribution of many professionals in the field. The immense contribution of various experts in developing this manual, though not mentioned individually, is greatly acknowledged.

Shri. Amarjeet Sinha, Joint secretary has been a continuous source of support in bringing out this manual. The technical support rendered by WHO, JHPIEGO, and USAID is deeply appreciated. The illustrations and details of the surgical procedure have been adapted from Illustrated Guide on “Minilaparotomy for Female Sterilization” by Engender Health, for which we are grateful to them.

I appreciate the untiring efforts of Dr.B.P.Singh, Engender Health, Dr. Prita Biswas, PSI and Dr. Jaya Lalmohan, Senior consultant, FP division for developing this manual. A special word of appreciation for Dr. S.K.Sikdar, Dr. Keerti Malaviya, Assistant Commissioners and Dr. Sudhir Maknikar, Dr.Vinay Viswanatha and Dr. Amrita Kansal consultants in the Family Planning Division for their contribution.

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(Dr. Kiran Ambwani)

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Introduction

Worldwide Female Sterilization is the most popular and effective method of contraception. In addition to being permanent, it is safe and relatively free from side effects. In India female sterilization is the most commonly accepted method among eligible couples. District Level House-hold Survey (DLHS) – 3 (2007-08) shows that 34.3% of the ever married women accepted female sterilization as a contraceptive choice (fig: 1). Though 5–6 million sterilization procedures are now done annually in India, the unmet need for female sterilization still remains high at 13.8 as per District Level House-hold Survey (DLHS) –3, with a greater need in rural population. This unmet need is mainly due to the lack of availability of skilled service providers at the peripheral health facilities.

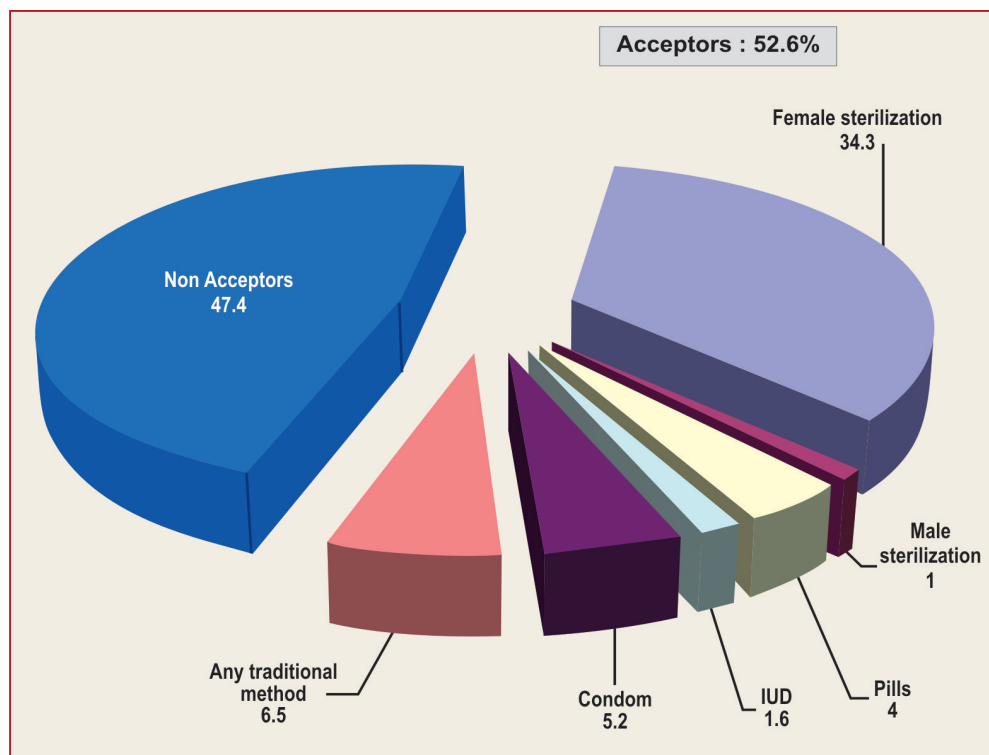


Fig. 1 : Current use of Family Planning Methods in India (DLHS-3) 2007-08

In India, female sterilisation is being done by Minilap tubectomy and Laparoscopic tubal ligation. Though both methods are equally safe and effective, a trained Gynaecologist or surgeon is required for lap. Sterilisation whereas minilap can be performed by a trained MBBS doctor. It has been also observed that states providing minilap tubectomy on a regular basis throughout the year have achieved replacement fertility levels. (Fig.-2) for example states like Kerala, Karnataka, Tamil Nadu and Andhra Pradesh.

In order to meet the high unmet need in female strilisation, it is imperative to have trained service provider for minilap tubectomy at the peripheral health facilities so as to provide regular fixed day services throughout the year. Increase in the institutional deliveries due to the JSY scheme gives ample

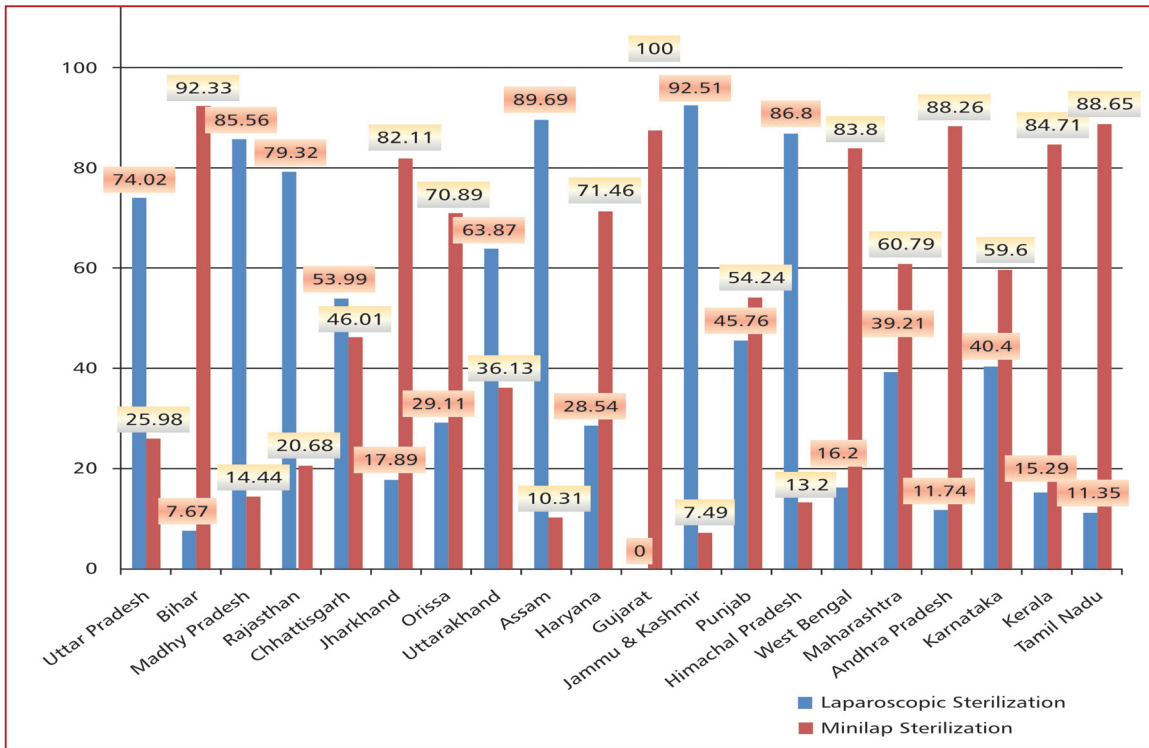


Fig. 2 : Laparoscopic Vs Minilap Sterilization in Different States

opportunities to bring down the unmet need of limiting method by offering post partum sterilization. This training manual is developed to ensure uniform standards in performing minilap tubectomy.

Scope of the Manual

This manual presents a detailed description of the procedure, illustrates step-by-step surgical technique, and also reviews basic requirements that are essential for the safety and effectiveness of minilap tubectomy. This will ensure uniform standards in the surgical technique at all training centres and service delivery facilities. At the end of the training period, the trainee must be able to screen clients, counsel them on different methods of contraception, perform minilap tubectomies safely and should be able to recognize and manage potential problems as well as provide appropriate follow-up.

Target Audience

This manual is intended for medical officers and institutions concerned with service provision and training in female sterilization by minilap tubectomy technique.

Overview of Minilap Tubectomy

Minilap Tubectomy, generally referred to as “minilap,” is an abdominal surgical approach to the fallopian tubes by means of an incision 2-3 cm in length. It has been performed safely and frequently in a wide range of countries including India for more than 30 years as a permanent method of female sterilization.

Minilap Tubectomy is also known as tubal sterilization, tubal ligation, voluntary surgical contraception, tubectomy, bi-tubal ligation, tying the tubes, minilap, and post partum sterilization, called “PPS’ if done within 7 days after delivery”.

Types of Procedure

The procedure for accessing the fallopian tubes and the steps of the Minilap Tubectomy depend upon the size of the uterus; thus, the procedure is selected based on timing related to last delivery. Sterilization by Minilap tubectomy can be interval sterilization using supra-pubic approach or post-partum sterilization using sub-umbilical approach.

1. Interval Sterilization (Suprapubic approach)

When the uterus is normal or close to normal in size (e.g., in clients any time during their menstrual cycle after ruling out pregnancy or after an uncomplicated first-trimester abortion), the surgeon can approach the tubes from an incision above the pubic bone.

2. Post-partum sterilization (Sub-umbilical approach)

Following delivery, when the uterus is enlarged, the uterine fundus and the tubes are high in the abdomen and can be approached by an incision under the umbilicus.

In many countries, immediate postpartum (between 24 - 48 hours of delivery), minilap tubectomy services are an integral part of maternity services.

The major advantages of postpartum minilap tubectomy include :

- Woman is already admitted in a facility and her current health status usually can be established from delivery and prenatal records.
- The uterus is high in the abdomen and a small incision (1.5-3.0 cm) just below the umbilicus is usually sufficient to access the tubes.
- Local anaesthesia with light sedation/analgesia is usually sufficient.
- Hospital stay beyond what is required for a normal delivery (often 72 hours) is not required after the procedure.

At the same time, certain precautions must be taken while providing immediate postpartum tubectomy. These include:

- Postpartum women should be carefully screened for problems like postpartum haemorrhage or other conditions that could lead to increased risk of infection.
- Special care must be taken when exposing the tubes, since the engorged postpartum vessels can bleed vigorously, if injured.
- The surgeon must ensure that ligatures on the tubes are secure to prevent slipping and haemorrhage after the procedure is completed.

When to Perform Post-Partum Sterilization

- Postpartum Sterilization to be performed between 24 to 48 hours provided there are no complication. The likelihood of postpartum haemorrhage is also reduced after 12–24 hours, thus increasing safety of the procedure for the woman.
- A delay of up to 7 days may be justified in situations which demand a more accurate assessment of the baby’s chances for survival.

NOTE: Seven days after delivery, the uterus descends into the pelvis, which makes access to the fallopian tubes more difficult. Bacteria are present more often in the tubes and endometrial cavity which leads to increased chance of infection. Hence the procedure should be postponed to 42 days (6 weeks) after delivery when the uterus has involuted and become less vascular and risk of pelvic infection is also reduced.

Timing of Minilap Tubectomy

IMPORTANT: If there is no medical reason to delay, a woman can have the female sterilization procedure any time she wants if it is reasonably certain she is not pregnant.

Woman’s Situation	When to Perform
Having menstrual cycles or switching from another method	<p>Any time of the month</p> <ul style="list-style-type: none"> • Any time within 7 days after the start of her monthly bleeding. No need to use another contraceptive method before the procedure. • If it is more than 7 days after the start of her monthly bleeding, she can have the procedure any time it is reasonably certain she is not pregnant. • If she is switching from oral contraceptives, she can continue taking pills until she has finished the pill pack to maintain her regular cycle. • If she is switching from an IUD, she can have the procedure immediately.
No monthly bleeding	<ul style="list-style-type: none"> • Any time it is reasonably certain she is not pregnant.

Woman's Situation	When to Perform
After childbirth	<ul style="list-style-type: none"> • 24 hours to 7 days after giving birth, if she has made a voluntary, informed choice in advance. • Any time 6 weeks or more after childbirth if it is reasonably certain she is not pregnant.
After miscarriage or abortion	<ul style="list-style-type: none"> • Within 48 hours after uncomplicated abortion, if she has made a voluntary, informed choice in advance.
After using emergency contraceptive pills (ECPs)	<ul style="list-style-type: none"> • The sterilization procedure can be done within 7 days after the start of her next monthly bleeding or any other time it is reasonably certain she is not pregnant. Give her a backup method or oral contraceptives to start the day after she finishes taking the ECPs, to use until she can have the procedure.

Mechanism of Action

In the female reproductive system, an egg (ovum) is produced in the ovary every month from menarche until menopause. The egg travels from the ovary through the fallopian tube where it meets the sperm from the male partner. During tubectomy, both fallopian tubes are occluded, generally by ligating and cutting so that after the procedure, the egg cannot travel beyond the occluded area and so cannot be fertilized by the sperm.

Safety

Minilap tubectomy under local anaesthesia in the hands of a well trained and skilled surgeon is safe and highly effective procedure.

- Less than 1 per cent of women suffer major complications and
- Less than 5 per cent have minor complications.

Effectiveness

Minilap tubectomy is one of the most effective methods but carries a small risk of failure. Most cases of failure occur within two years of the procedure.

- Less than 1 pregnancy per 100 women in the first year after having the sterilization procedure.
- Effectiveness varies slightly depending on how the tubes are blocked, but pregnancy rates are low with all techniques.
- Failure, may be due to abnormalities of the fallopian tubes; procedural errors and reopening of the tube (recanalization) during the healing process (Soderstrom 1986).

The presence of early, undetected pregnancy at the time of the procedure may be perceived as a failure and must be ruled out carefully.

Note : *Tubectomy does not increase the incidence of ectopic pregnancy. However, if a woman does become pregnant after tubectomy, she is more likely to have an ectopic pregnancy. (Pollack 1993). **All women who have undergone minilap tubectomy and present with symptoms of pregnancy, should be carefully evaluated for ectopic pregnancy***

Case Selection

Self-declaration by the client will be the basis for compiling this information.

- Clients should be married (including ever-married).
- Female clients should be below the age of 49 years and above the age of 22 years.
- The couple should have at least one child, whose age is above one year, unless the sterilization is medically indicated.
- Clients or their spouses/partners must not have undergone sterilization in the past (not applicable in cases of failure of previous sterilization).
- Clients must be in a sound state of mind, so as to understand the full implications of sterilization.
- Mentally ill clients must be certified by a psychiatrist, and a statement should be given by the legal guardian/spouse regarding the soundness of the client's state of mind.

Eligibility of Providers

Any trained and empanelled MBBS doctor can provide minilap tubectomy services at an accredited facility.

The state should maintain a district-wise list of doctors empanelled for performing sterilization operations in government institutions and accredited private /NGO facilities. The panel should be updated quarterly.

Counselling and Informed Consent

Counselling is an ongoing process that is integrated into all aspects of family planning service provision, enabling clients to make a voluntary, informed choice. Clients are likely to adjust well and be satisfied with their decision after surgery, if service providers have told them, what to expect and if they take responsibility for the decision to end their fertility. Satisfied clients also spread positive messages regarding the contraceptive method, they are happy with.

Every person working in a health facility contributes to the counselling process. Therefore, it is important that all of them are oriented to family planning counselling, in order to provide quality family planning services.

Stages in Counselling

The counselling process goes through three stages.

Stage I. General Counselling

This is the first stage and is carried out during the initial contact with the client. During this session, family planning needs are discussed; information on various contraceptive options is provided; client concerns, myths, questions are addressed; and decision-making and method choice begin.

Health workers like ANM, AWW and ASHA can provide general counselling during Village Health Nutrition Days, community meetings and home visits.

Stage II. Method-Specific Counselling

In this stage, following decision-making and method choice, more specific information on the chosen method is provided; the screening process and procedures are explained; and information on follow-up, side-effects and complications is provided.

Reinforcement of messages is done, by having the client repeat key instructions

Method characteristics (benefits and limitations) explained during method specific counselling for minilap tubectomy include:

- The method involves pelvic examination and surgery.
- How the method prevents pregnancy.
- How the procedure is performed, how long it takes and what to expect.
- Sterilization is intended to provide permanent prevention against pregnancy. Reversal is usually difficult.

- Sterilization will not affect normal sexual functioning, menstrual periods and physical or mental health.
- Sterilization does not protect against RTI/STI/HIV/AIDS.
- The incidence and consequence of failure of the method.
- Warning signs and their management.

Informed consent is needed, which is given and signed by the client herself.

Medical officer, lady health visitor, auxillary nurse midwife and counselor should do method specific counselling during antenatal, intra-natal, post natal period and at Immunization or Well Baby Clinics

Pre-Procedure Counselling

Though the client has undergone Method Specific Counselling in the previous step, the client may still have last minute doubts that must be addressed:

- Any questions that the woman may have regarding the procedure and what she can expect (e.g., recovery period, pain at the incision site etc.) should be answered.
- The consent process is again reviewed with the client to ensure that she has indeed given an informed, voluntary consent for the sterilization and she understood that sterilization is intended to provide permanent prevention against pregnancy and reversal is usually not possible.
- The woman is also given clear instructions on how to prepare herself for surgery.

Post-Procedure Counselling

This is usually done after surgery before discharging client from the facility. Some elements of this counselling, however, should have been done earlier and reinforced at this time (e.g., pain at the incision site for a few days and other common side-effects).

The focus of post-procedure counselling is however on warning signs (e.g., fever, persistent abdominal pain, bleeding or pus at the incision site) which indicate the need for a quick return to the clinic. In addition, the client should be:

- Informed about whom to contact, if she develops any problems (warning signs) or has any concerns, and
- Given written information (e.g Follow-up Card) on the dates of her follow-up visits.

Stage III. Follow-Up Counselling

The information provided during post-procedure is reinforced. Service providers need to listen attentively and be prepared to answer questions about and address problems that the client has experienced after undergoing the minilap procedure. This helps the client cope with common problems or side effects. At each follow-up visit, the following should be addressed gently and patiently:

- Problems encountered since the last visit, and
- Concerns about side effects and/or problems.

Informed Consent

In family planning counselling, the right of clients to receive accurate information and make their own decisions -their right of informed choice- is considered fundamental. It often involves a written statement that the client signs to verify understanding of the method, medical procedure and risks.

Another important purpose of obtaining informed consent is to protect the service provider from lawsuits alleging malpractice. In family planning programs, informed consent usually is required only for sterilization, because it is a permanent method.

Informed Choice and Informed 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.

Documentation of Informed Consent

In India, the client's signature or putting her thumb mark on an informed consent form is the legal authorisation for the tubectomy procedure to be performed. The client must always sign or put her thumb mark on the informed consent form. **(Annexure-1).**

A witness chosen by the client must also sign the form -any person not associated with the service facility).

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

The following steps must be taken before the client signs the consent form

She must:

- be informed of all the available methods of family planning so that she can make an informed choice.
- make an informed and voluntary decision for sterilization.
- be counselled preferably in a language that she understands.
- be made to understand what will happen before, during and after the surgery, its side effects or potential complications.
- be encouraged to ask questions or clarify any doubts that she has.
- be told that she has the option of deciding against the procedure at any time without being denied of her rights to other reproductive health services.

Clients must be told that a reversal of this surgery is possible, but the reversal involves a major surgery and its success cannot be guaranteed.

Before starting any part of the procedure, including administration of sedative drugs, it is the responsibility of the service provider to ensure that the client has made a free, informed and well-considered decision, in order to minimize the possibility of regret in the future

***Note:** There is no requirement for spousal consent legally, but because tubectomy is a permanent procedure, a joint decision usually will mean more satisfied clients and fewer complaints to health workers following the surgery. It may be advisable to find out how the spouse feels about adopting the method. If the spouse is not in favour of it, the provider should caution the client about going ahead with the procedure.*

Documenting Denial of Tubectomy

When a client is evaluated to be unsuitable for tubectomy for either 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). The 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 found unsuitable for tubectomy.

A client who is unable to undergo tubectomy should be counselled and offered another method of contraception.

Medical Eligibility Criteria

With proper counselling and informed consent most women can have female sterilization safely. However, certain conditions or circumstances require some precautions either in timing of the procedure or selection of the facility where the procedure is to be performed.

A targeted medical history, physical examination and laboratory investigations need to be completed to ascertain eligibility for surgery.

The World Health Organization (WHO) has developed: Medical Eligibility Criteria" (MEC) a system for assessing **how, when** and **where** minilap tubectomy procedures should be performed and categorizes the various medical conditions into:

- A (Accept),**
- C (Caution),**
- D (Delay), and**
- S (Special)**

In order to maximize access to quality minilap tubectomy services, the WHO Eligibility Criteria have been adapted by countries according to need. The WHO MEC, modified as per Indian conditions is as follows:

A (Accept), C (Caution), D (Delay), and S (Special)

All women can have female sterilization. No medical conditions prevent a woman from undergoing female sterilization, but may limit when, where, or how the female sterilization procedure should be performed.

ACCEPT:

The majority of clients are classified under '**Accept**', and the procedure can be performed in most clinical settings.

CAUTION:

Clients identified with conditions requiring '**Caution**' can be provided minilap tubectomy in routine setting but with extra preparation and precautions, as required. The conditions included in this category are.

1. Moderate iron deficiency anemia (Hb 7 - 10 g/dl)
2. Previous abdominal or pelvic surgery

3. Obesity
4. Controlled BP (140-159/ 90-99)
5. Uncomplicated heart disease
6. History of ischemic heart disease
7. Stroke
8. History of cerebro-vascular accident
9. History of deep vein thrombosis or pulmonary embolism
10. Epilepsy
11. Depressive disorders
12. Current breast cancer
13. Uterine fibroids
14. PID without subsequent pregnancy
15. Uncomplicated diabetes
16. Hypothyroidism
17. Mild cirrhosis
18. Liver tumors
19. Kidney disease
20. Thalassemia and Sickle Cell Disease

DELAY:

Delay means postpone minilap tubectomy. These conditions must be treated and resolved before female sterilization can be performed.

1. Current pregnancy
2. 7 – 42 days postpartum
3. Pregnancy with severe pre-eclampsia or eclampsia
4. Post partum or post abortion complications (infection, hemorrhage and trauma)
5. Current DVT/PE
6. Major surgery with prolonged immobilization
7. Abdominal skin infections
8. Current ischemic heart disease

9. Lung disease like pneumonia
10. Systemic infection
11. Unexplained vaginal bleeding
12. Large collection of blood in uterus
13. Malignant trophoblastic disease
14. Cancers of the genital tract
15. Current PID
16. Current purulent cervicitis, Chlamydia, gonorrhea
17. Current gall bladder disease

Give the client another contraceptive method until till the procedure can be performed.

SPECIAL:

Certain women have conditions that make operation difficult or increase the risks. Women with the following conditions should have their surgery in a well-equipped facility, with availability of general anaesthesia and other back- up for emergency.

1. Conditions that increase chances of heart disease or stroke i.e. older age, smoking, high BP or diabetes
2. Blood Pressure > 160/100
3. Complicated heart disease
4. Coagulation disorders
5. Chronic lung diseases (asthma or emphysema)
6. Endometriosis
7. AIDS
8. Pelvic tuberculosis
9. Fixed uterus due to previous surgery or infection
10. Abdominal wall or umbilical hernia
11. Post partum or post abortion uterine rupture or perforation
12. Diabetes > 20 years with organ damage
13. Hyperthyroidism
14. Severe cirrhosis of liver

Note : Female Sterilization In Women With HIV/AIDS

- Women who are infected with HIV, have AIDS, or are on antiretroviral (ARV) therapy can safely undergo female sterilization. **The procedure is done as on other clients, ensuring universal precautions.**
- Counsel these women to use condoms in addition to female sterilization. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs. (Dual Protection).
- No woman should be coerced or pressured into having sterilization, and that includes women with HIV.

Client Assessment

Client Assessment for eligibility to undergo miniap tubectomy is a key factor in minimizing risk of complications and ensuring quality of service delivery.

Details of Assessment

Assessment of potential tubectomy clients should include demographic information, a targeted medical history, a physical examination including a complete pelvic examination and relevant investigations.

1. Demographic Information

The following information is required: Name, husband's name, address, age, marital status, occupation, religion, educational status, number of living children and age of youngest child.

2. History

Specific information which should be obtained as part of the medical history includes:

- **Menstrual History** – date of last menstrual period (LMP)
- **Obstetric history** - number of pregnancies and living children, date of last childbirth or abortion
- **Contraceptive history** – when and what was the last contraceptive used
- **Medical History** –
 - Past history of illness and other medical conditions mentioned under the medical eligibility criteria
 - Allergies (especially to pain and other medications)
 - Immunization status of women for tetanus
 - Current medications

3. Physical Examination

This should include a general examination, examination of abdomen and pelvis and any other examination, as indicated by the client's medical history or general physical examination.

General examination:

- Pulse, blood pressure, respiratory rate, temperature
- Body weight, general condition, pallor and nutritional status
- Auscultation of heart and lungs

- Signs of anaemia: such as
 - pale skin or conjunctiva
 - rapid pulse (> 100)
 - systolic murmurs

Abdominal examination:

- suprapubic or pelvic tenderness
- masses or gross abnormalities
- surgical scars

Pelvic examination:

Ensure that the client has passed urine before performing a pelvic examination:

- Inspect external genitalia for abnormalities and lesions (enlarged groin nodes)
- Speculum examination
 - check for abnormal vaginal discharge
 - check cervix for purulent cervicitis
 - if indicated by history and physical findings and a microscope is available, obtain specimens of vaginal and cervical discharge for diagnostic studies
- Bimanual examination
 - check for cervical motion tenderness
 - determine size, shape, position and mobility of uterus
 - check for mass or tenderness of the adnexa, active PID, etc.
 - check for signs of pregnancy
 - check for uterine abnormalities
- Recto-vaginal examination is performed only if findings on bimanual examination are suspicious, for example, mass in cul de sac. Check for pouch of Douglas mass or tenderness

4. Investigations:

Pregnancy test

This is usually not necessary except in cases where it is difficult to confirm or rule out pregnancy by pelvic examination (i.e., very early pregnancy less than 6 weeks from LMP) or the results of a pelvic examination are equivocal (e.g., the size and consistency of the uterus are difficult to determine due to obesity or a retroverted uterus). In these situations, a highly sensitive pregnancy test (positive within 10 days after conception) may be necessary. If **pregnancy testing** is not available, counsel the client to use a barrier method until her next menses to rule out pregnancy and plan the procedure for the next menstrual cycle.

How to Be Reasonably Sure that the Client Is Not Pregnant

You can be reasonably sure the client is not pregnant, if she has no signs or symptoms of pregnancy (e.g., breast tenderness or nausea) and:

- Has not had intercourse since her last menses; or
- Has been correctly and consistently using a reliable contraceptive method; or
- Is within the first 7 days after the start of her menses ; or
- Is within 4 weeks postpartum (for women who are not breastfeeding); or
- Is within the first 7 days post-abortion; or
- Is fully breastfeeding, is less than 6 months postpartum and has had no menstrual bleeding.

Other Lab Investigations

Extensive laboratory investigations are unnecessary for procedures under local anaesthesia. Routine investigations like haemoglobin and urine analysis for albumin and sugar are necessary. Other investigations may be conducted if indicated.

Final Assessment

After reviewing the client's suitability for minilap tubectomy, the operating surgeon should conduct a final assessment prior to surgery at the facility where the procedure is to be performed.

The operating surgeon must fill in the medical record and checklist (Annexure - 4)

Chapter - 6

Anaesthesia

Local anaesthesia has proven to be the most appropriate anaesthesia for minilap tubectomy and has allowed health institutions to provide sterilization services safely even in settings with limited resources. Although general and regional anaesthesia can be used safely and effectively for abdominal tubectomy, the number of unexpected and life-threatening complications related to general or regional anaesthesia is higher than the number associated with local anaesthesia (WHO, 1992). Thus, general and regional anaesthesia should be used only in settings that are properly equipped and staffed to provide such anaesthesia and to handle emergencies.

Local anaesthesia is cost-effective as it is considerably less expensive than general anaesthesia with respect to equipment and level of training required.

The key to a successful abdominal tubectomy programme is the availability of doctors who are adequately trained to operate under local anaesthesia.

This guide discusses minilap tubectomy under local anaesthesia and sedation i.e combination of local infiltration of anaesthetic agents and systemic administration of sedatives and analgesics.

Pre-Medication-Anaesthesia-Analgesia

A) Pre-Medication:

Reassurance and proper explanation of the procedure goes a long way in allaying the anxiety and apprehension of the client. However, if needed, tablet Alprazolam (0.25 to 0.50 mg) or tablet Diazepam (5 to 10 mg) can be given the night before the operation.

Inj. atropine 0.6.mg, given intramuscularly before the surgery, reduces oral secretions and the possibility of vaso-vagal syncope or cardiac arrest.

B) Sedation and Analgesia:

The anxiolytic, sedative, light muscle-relaxant and amnesic effects produced in the client by the sedation regimens allow surgery to be performed under local anaesthesia without difficulty. The commonly used drug regimens for sedation and analgesia are listed in the table below.

Drugs for preoperative and intra-operative sedation and analgesia

Approximate Weight/ Built	Name of the Drugs & Dose	Route & Time of Administration
Thin built (approx. < 40 Kg)	Pentozocine 15 mg + Promethazine 12.5 mg or Pethidine 25 mg + Promethazine 12.5 mg	IM - 30 to 45 minutes before Surgery or IV - 5 minutes before surgery
Average built (40-50 kg)	Pentozocine 22.5 mg + Promethazine 12.5 mg or Pethidine 37.5mg+ Promethazine 12.5 mg	IM- 30 to 45 minutes before Surgery or IV - 5 minutes before surgery
Well built (> 50 kg)	Pentozocine 30mg + Promethazine 25mg or Pethidine 50mg+ Promethazine 25mg	IM – 30 to 45 minutes before Surgery or IV - 5 minutes prior to surgery

Dosage according to body weight is: Pethidine 0.5 to 1 mg/Kg, Pentazocine 0.5 mg/ kg) and Promethazine 0.3 - 0.5 mg/kg.

A repeat dose (if required) is given slowly intravenously as Pethidine 10mg or Pentazocine-30 mg, 45 minutes after the first dose.

The drugs should be diluted with equal quantity of normal Saline or distilled water before IV administration.

C) Local Anaesthesia:

Skin sensitivity tests to local anaesthetic agent (lignocaine) has no proven predictive value for anaphylactic reaction. Therefore it is not mandatory to perform skin sensitivity test prior to infiltration of Lignocaine.

The following steps are required for administration of local anaesthesia;

- An IV line is to be secured before beginning the procedure.
- **Lignocaine without adrenaline**, is the local anesthetic agent that is to be infiltrated. The maximum dosage is 3 mg per kg body weight.
- Client must be continuously monitored during and after parenteral administration.
- Oral communication must be maintained with the client throughout the procedure.

General Anesthesia may be required in case of a non-co-operative patient, excess obesity or history of allergy to local Anesthetic drugs. Cases under GA should be done in centres where all routine and emergency back-up facilities are present for providing general Anesthesia.

Client Preparation

Since anxiety contributes to perception of pain, the surgical team should constantly communicate with the client before, during, and after the procedure, to help her relax and feel comfortable. She should be told in simple language what to expect, before the procedure starts, as well as what is being done, during the procedure.

Technique

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 parietal peritoneum. Each of these layers should be carefully infiltrated with local anesthetic. Additionally dropping anesthetic agents 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 pain.

- **Lidocaine is the recommended local anesthetic and the recommended concentration is 1% lidocaine without epinephrine. The usual dose for local infiltration is 3 mg/kg of body weight and onset of action is in typically within three to five minutes, with the anesthetic effect lasting up to 45 minutes.**
- **2% lidocaine solution must be diluted to 1% using normal saline or sterile water for injection.**
- **Confirm the effect of anesthesia before surgery.**

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 formation of undetected hematomas later
2. Epinephrine is dangerous, if accidentally injected intravascular.

Monitoring

As in any abdominal surgery, client monitoring is essential. It is of special importance during the use of local anesthesia, especially if sedatives and analgesics are also used, as the drugs may cause respiratory and cardiovascular depression, hypersensitivity reactions, or central nervous system toxicity. Monitoring enables the surgical team to detect these problems early and to respond timely before complications progress and become difficult to manage.

Important Steps of Monitoring

1. Maintain Client Records

Client records are to be maintained on monitoring of vital signs (pulse, respiration and blood pressure), level of consciousness, vomiting and other relevant information. The name of the drug, dosage route and time of all administered drugs must be recorded.

2. Pre-operative Monitoring

Pulse, respiration and blood pressure should be taken prior to pre-medication and every 10 minutes thereafter.

3. Intra-operative Monitoring

Verbal communication with client must be maintained and pulse, respiration and blood pressure must be checked and recorded every 5 minutes.

4. Post-operative Monitoring

Pulse, respiration, and blood pressure are to be monitored and recorded every 15 minutes for at least one hour after surgery or even longer if the patient is unstable or not awake.

Prevention of Infection

Health care providers and support staff like lab technicians and housekeeping are at risk of acquiring serious and often potentially life threatening infections unless adequate precautions are taken to prevent the transmission of infection. Hence, It is mandatory to practice recommended infection prevention measures at all times to decrease the risk of transmission of infection, including Human immunodeficiency virus (HIV), Hepatitis C (HCV), and Hepatitis B (HBV).

Standard Universal Precautions of infection prevention include:

1. Hand Washing.
2. Self protection such as wearing gloves and other physical barrier/attires.
3. Safe Work Practices (Prevent injuries from sharps).
4. Maintain correct environmental cleanliness.
5. Correct processing of instruments and other items.
6. Proper waste disposal practices and handling, transporting and processing used/soiled linen correctly.

Hand Washing

Routine Hand Wash

- i. Routine hand washing is to be done before and after examining or having any direct contact with a client, before wearing gloves and after removing them.
- ii. Plain or antiseptic soap should be used for routine hand washing; Hands should be dried with a clean towel or air dry; Do not use shared towels.
- iii. Micro-organisms grow and multiply in moisture and standing water. Therefore:
 - Avoid dipping hands repeatedly into basins containing standing water even if it contains an antiseptic agent. Microorganisms can survive and multiply in these solutions.
 - If bar soap is used, provide small bars and soap racks which drain.

Choose from the following options when running water is not available:

- Use a bucket with a tap or a bucket and pitcher.
- Use an alcoholic handscrub in between procedures.

Note: A non-irritating alcohol hand-srub solution can be prepared by adding glycerine, propylene glycol or Sorbitol to the alcohol (2 ml in 100 ml of 60-90% alcohol solution).

Collect used water in a basin and discard in a toilet, if a drain is not available.

Surgical Scrub

The surgeon and his/her assistant must scrub both the hands and forearms 2 cms above elbow thoroughly with soap and water or antiseptic agents. The entire procedure should be repeated at least three times so that the scrub lasts for 3 to 5 minutes. A small stick or a brush should be used for cleaning fingernails. The hands and forearms should be dried with a sterile towel only.

Ideally, the surgeon and the assistant should scrub thoroughly between each procedure.

In high case load settings, the surgical staff should do a surgical scrub every hour or after every five cases (whichever is earliest), or if surgeon goes out of OT or touches any unsterile object or the glove is torn. In between, alcohol antiseptic scrubbing should be done before changing gloves.

Antiseptics

Some chemicals that qualify as safe antiseptics are:

- Chlorhexidine gluconate (4%) (e.g., Hibiclens, Hibiscrub, Hibitane).
- Chlorhexidine gluconate and cetrimide, various concentrations.
- Iodine (1–3%); aqueous iodine and alcohol-containing products (tincture of iodine).
- Iodophors, various concentrations.

Self Protection of Health Care Providers

1. All doctors, nurses and other health providers must wear proper gloves during all procedures involving contact with any patients and biological fluid.
2. Cleaners and other staff should wear protective heavy duty gloves and gumboots while cleaning and handling soiled materials and linens.
3. For minilap tubectomy, all OT staff must change their shoes, wear theatre gowns/short-sleeved shirt and pajama / and caps, masks and surgical gloves. The surgical mask should cover the bridge of the nose at all times.

Remember to wash hands thoroughly after removing gloves, because they may have invisible holes or tears

Safe Work Practices

Preventing Injury Due To Sharps:

Accidental injuries due to sharps is the number one cause of occupational exposure to blood borne pathogens e.g. injury from needles, blades or other sharp objects. All staff that comes in contact with sharps—doctors, nurses, ayahs, sweepers and ones who dispose off the waste—is at risk of infection. Safe handling of sharp instruments during operation is done by using the ‘no touch technique’ of placing them on a small kidney tray, instead of handing them over to another person directly.

Precautionary measures to prevent injuries due to sharps:

- Use 'no touch technique' while handling sharps.
- Handle needles, syringes, blades and other sharps minimally and carefully, after use.
- Always wear thick utility gloves while washing or disposing sharp objects.
- Do not attempt to bend or break the needles before destroying; do not detach or recap. The preferred way of destroying used needles is by using a needle destroyer, which burns the tip of the needle.
- If a needle destroyer is not available or non-functional, used needles should be disposed off in a puncture-proof container with a lid made of metal or heavy rigid plastic or cardboard. The container should be sealed and disposed off when three-fourths full, by burying or incineration.

All staff at risk of exposure to infected blood or other blood fluids, should be vaccinated against Hepatitis B. However, this is in addition to and not an alternative to universal precautions.

Management of Injuries from Needles and Other Sharps

If accidental exposure to blood or other body fluids occurs;

- Wash the needle sticks or cuts thoroughly with soap and water.
- Flush water into the nose, mouth or on skin.
- Wash eyes with water or saline.

Post exposure prophylaxis can reduce the risk of transmission of blood borne pathogens. It includes:

- Hepatitis B/C immunoglobulin along with Hepatitis B/C vaccine can reduce the risk of infection after exposure to blood or other body fluids containing hepatitis B/C virus.
- If needle prick injury or other cut occurs, a physician should be consulted immediately and antiretroviral drugs, either alone or in combination, can be started according to National Aids Control Organization (NACO) guidelines, to reduce the risk of transmission. This is also called **post-exposure prophylaxis**.

Environmental Cleanliness

Before Surgery

Clean the floor and operating table/counter top with a mop soaked in 0.5% chlorine solution with detergent.

After Surgery

Scrub all operating room surfaces that come into contact with the patient or her body fluids (such as operating table, counter/table tops etc.) between procedures , by scrubbing and wiping them with 0.5% chlorine solution and detergent.

When not in use

The Operating Theatre should be locked when not in use. Weekly scrubbing is recommended with a mop soaked in 0.5% chlorine solution with detergent solution. Scrubbing and mopping of walls should be done from top to bottom.

Movement in and around OT

- The entry of people and their movement inside the OT should be minimal as the number of microorganisms inside the OT is directly related to number of people and their movement .
- During surgery, the door of OT should be kept closed.
- Only the personnel performing / assisting the procedure should enter the OT.
- Personnel with any infection should not enter the OT at all.

Processing of Equipment, Instruments and Other Reusable Items

Decontamination and cleaning of equipment, instruments and other reusable items, followed by sterilization or high level disinfection, minimizes the risk of transmission of infection.

Decontamination

Decontamination is the very first step in processing reusable items. It kills microorganisms and a few bacterial endospores also. Decontamination is done by soaking instruments and other reusable items in a 0.5% chlorine solution for 10 minutes, immediately after use.

Preparation of 0.5 % Chlorine Solution

Mix 15 gms. of commercially available bleaching powder containing 30-35% of chlorine (about 1 table spoon full or 3 teaspoon full) in one litre of tap water. Make a paste of the bleaching powder before dissolving in water. Always wear utility gloves while preparing chlorine solution. Prepare chlorine solution only in plastic containers. Never use a metallic bucket to prepare and keep chlorine solution.

If liquid bleach is used, mix one part of bleach to 9 parts of water using the same container to measure bleach and water.

If the percentage of chlorine in bleaching powder differs, calculate the ratio of bleach to water using following formula:

$$\frac{\% \text{ chlorine desired} \times 1000}{\% \text{ chlorine in bleach Powder}} = \text{number of grams of powder for each liter of water for each part bleach}$$

Steps of Decontamination

1. Immediately after use, decontaminate instruments, reusable gloves and other items by placing them in a plastic bucket containing 0.5% chlorine solution, for 10 minutes. Ensure that all instruments are open and completely immersed inside the solution.
2. After 10 minutes, remove the items from chlorine water and rinse with water or clean with soap and water solution immediately. Excessive soaking of instruments can damage and corrode them. Always wear thick utility gloves when removing items from chlorine water.
3. Prepare a new chlorine solution at the beginning of each day or when solution gets visibly dirty or cloudy during the day.

Cleaning

Cleaning of instruments and other items, physically removes organic matter, such as blood and other body fluids, tissues dirt etc. whose presence makes further sterilization/high level disinfection (HLD) process ineffective. Thorough cleaning by scrubbing in soap and water solution also helps in reducing the number of micro-organisms and bacterial endospores on instruments and equipment, significantly.

- The instruments and other items should be scrubbed vigorously with a brush in lukewarm water with detergent. Soap is not recommended as it can leave a residue.
- Hot water should not be used because it can coagulate protein such as blood, making it hard to remove.
- The items should then be rinsed thoroughly with water and allowed to air dry. Items to be high level disinfected by boiling can be directly placed in a pot of water after cleaning.

High-Level Disinfection (HLD)

High Level Disinfection is effective in eliminating all micro organisms (viruses, bacteria, protozoa and fungi), but not bacterial endospores. It is the only acceptable alternative for processing instruments and other items used for minilap tubectomy, if sterilization is not possible.

After decontaminating (instruments and surgical gloves) and cleaning and rinsing instruments, high-level disinfect them using one of the following processes:

1. HLD by Boiling :

- a. Open or take apart items.
- b. Fully immerse items in water in a covered pan and heat.
- c. Bring water to a rolling/bubbling boil, and boil for 20 minutes in a pot with a lid. Do not add anything to the pot after boiling begins.
- d. Remove items using high-level disinfected forceps, and place in a high-level disinfected container.
- e. Allow items to cool and air dry.
- f. Use objects immediately or store them in a covered airtight, dry high level disinfected container for up to 7 days. If stored in an ordinary covered container, it can be used up to 24 hours.

2. HLD by Chemicals:

- a. Fully immerse items in an appropriate high-level disinfectant (i.e., 2% glutaraldehyde or 0.5% chlorine solution).
- b. Soak them for 20 minutes.
- c. Remove items using new/clean examination or high-level disinfected surgical gloves, and high-level disinfected forceps.
- d. Rinse items three times with water boiled for 20 minutes.
- e. Place them in a high-level disinfected container and air dry.
- f. Use within 24 hours.

Surgical Items should never be kept soaked in water or solutions such as Cetavlon, spirit, carbolic acid, Glutareldehyde etc.

Sterilization

Sterilization eliminates all micro organisms (bacteria, viruses, fungi and protozoa) including bacterial endospores, from instruments and other items.

Sterilization is recommended practice for all procedures for items such as linens, needles, syringes and surgical instruments.

a) Steam sterilization (autoclaving)

- Always follow specific operating instructions supplied by the manufacturer.
- Decontaminate, clean and dry all instruments that are to be autoclaved.
- Wrap cleaned instruments in cloth or newspaper or place unwrapped instruments in a metal container.
- Arrange wrapped packs in the chamber or drum in a way that allows free circulation of heat or steam to all surfaces.
- Items such as scissors and forceps should be sterilized in open position.
- Sterilize instruments for the recommended time as shown below:

Steam Sterilization Standards

Time: 20 minutes for unwrapped and 30 minutes for wrapped instruments and linens. Gloves should always be sterilized for 30 minutes by wrapping in paper/newspaper and should be used 24–48 hours after sterilization so that they regain their elasticity.

Pressure: 15 lb/Sq inch.

Temperature: 121°C. If temperature gauge is not fitted in the autoclave, observe pressure only.

Sterilized packs can be used up to one week, if kept dry and intact and drum is not opened. Once drum is opened, use within 24 hours.

b) Sterilization by chemical method

- Decontaminated, cleaned and dried items are put in 2 per cent glutaraldehyde solution for at least 8 hours.
- Items such as scissors and forceps should be put into the solution in an open position.
- Do not add or remove any items once timing starts
- Items should be rinsed well with sterile water (not boiled water), air-dried and stored in a covered sterile container for up to seven days. Sterile water can be prepared by autoclaving water for 20 minutes at 15 lb/ sq inch, in an autoclave.
- This method is most suitable for endoscopes and plastic cannulas.

Processing Flow Chart

Decontamination

**Soak in 0.5% chlorine solution
For 10 minutes**



THOROUGHLY WASH AND RINSE

Wear gloves and other protective barriers (glasses, visors or goggles)



Preferred Methods

Acceptable Methods

STERILISATION

**HIGH-LEVEL
DISINFECTION (HLD)**

Autoclave 15 lbs./in² pressure 121°C (250° f) for 20 min. if unwrapped and for 30 min. if wrapped

Chemical Soak in cidex for 8 hours, Rinse with Sterile Water

Boil lid on 20 minutes

Chemical Soak in Cidex for 20 minutes. Rinse with water that has been boiled for 20 minutes



COOL AND DRY
(Use immediately or store)

ITEM-WISE RECOMMENDED METHODS

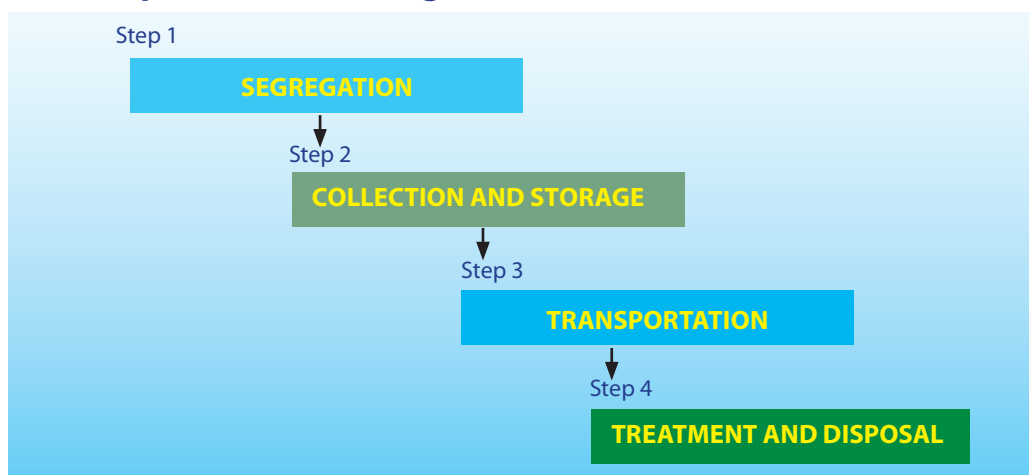
Material	Method	Procedure
Linens (drapes, sponges, scrub suits, operating packs etc)	Autoclave	<ul style="list-style-type: none"> • 121° C at 15 lbs/Sq. inch pressure for 30 minutes. • Use within one week. • If drum is opened, use within 24 hours.
Rubber items (gloves, catheters, and rubber tubing)	Autoclave or	<ul style="list-style-type: none"> • 121° C at 15 lbs/Sq. inch pressure for 30 minutes. • Wrap rubber items in paper/news paper before autoclaving. • Gloves should always be used 24 – 48 hours after sterilization, so that they regain their elasticity.
	High level Disinfection or	After water comes to rolling boil, boil in immersed state for 20 minutes
Surgical Instruments	Sterilisation by Chemical Methods: Sterilization by Autoclaving	Immerse in either Paracetic acid or Glutareldehyde 2% for 30 minutes 10 Hours 10 Minutes 20 Minutes Dilution is not advised <ul style="list-style-type: none"> • 121° C at 15 lbs/Sq. inch pressure • 30 minutes for wrapped and 20 minutes for unwrapped items • Unwrapped items should be used immediately
	High level Disinfection	After water comes to rolling boil, boil in immersed state for 20 minutes

Waste Management

Waste Management has four important steps.

1. Segregation.
2. Collection and Storage.
3. Transportation.
4. Treatment and Disposal.

1. Steps for Waste Management



Segregation

Do's

Segregate waste into infectious and non-infectious waste, where it is generated at the health facility.

Infectious waste:

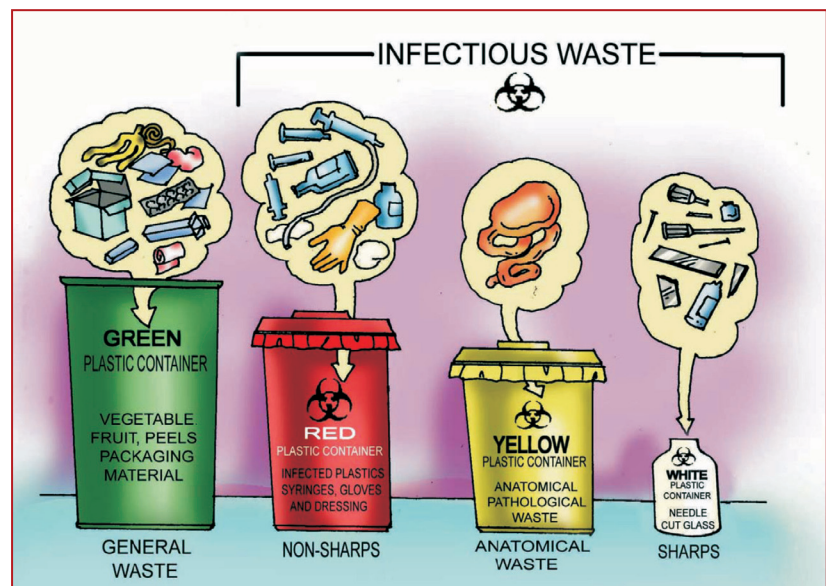
- Sharps: needles, blades, broken glass are to be disposed in white/blue puncture proof container.
- Non-Sharps like soiled and infected plastics, syringes, dressings, gloves, masks, blood bags, urine bags are to be disposed in red plastic bins/bags.
- Anatomical or Pathological waste like placenta, body parts etc are to be disposed in yellow plastic bins/bags.

Non-infectious (General) waste:

This includes waste similar to household waste like packaging material, cartons, fruit and vegetable peels, syringe, needle wrappers and medicine covers. These should be disposed in green/black plastic bins or bags.

Don'ts

Never mix infectious and non-infectious waste during generation, collection, storage, transportation or final disposal.



Collection and Storage

Do's

- Always collect waste in covered bins.
- Empty bins after they are filled up to 3/4th level.
- Clean the bins regularly with soap and water or disinfect the bins regularly, depending upon the type of waste material in the bin.

Don'ts

- Never fill the bins more than 3/4th of their capacity.
- Never mix infectious and non-infectious waste in the same bin.
- Never store waste beyond 48 hrs.

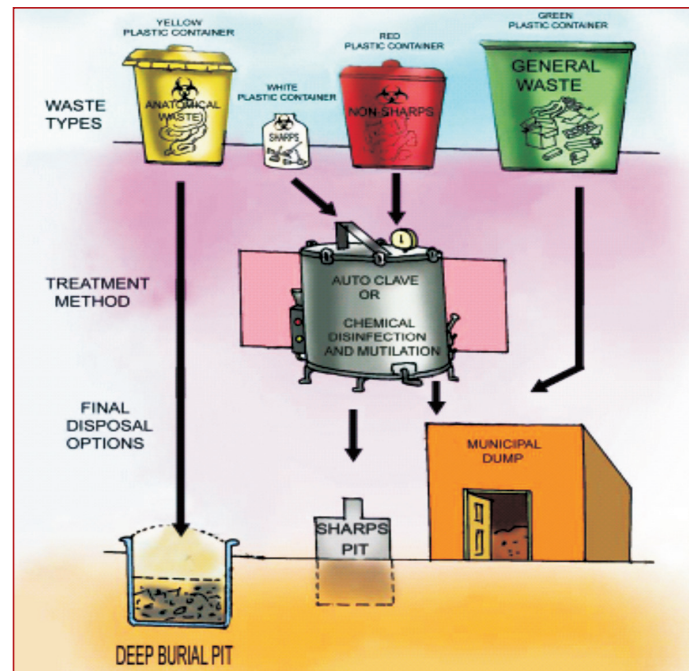
Transportation

Do's

1. Always carry or transport the waste in closed containers.
2. Use dedicated waste collection bins/trolleys/wheel barrows for transporting waste.
3. Transport waste through a pre-defined route within the health care facility.

Don'ts

1. Never transport the waste in open containers or bags as it may spill and lead to spread of infections.
2. Never transport waste through crowded areas.



Treatment and Disposal

Do's

1. Always remember to treat waste before final disposal.
2. Remember the following while treating the waste.
 - a. Anatomical waste has to be deep buried / incinerated.
 - b. Syringes must be cut with hub cutters and chemically disinfected with 1% chlorine solution at source of generation before final disposal into sharps pit.
 - c. Infected plastics should be chemically disinfected or autoclaved, then shredded before final disposal in municipal dumps.
 - d. General waste can be sent without any treatment to municipal dumps for final disposal.

Don'ts

Never throw infectious waste into general waste without any pre-treatment.

The Surgical Procedure

The following principles should guide mini-lap tubectomy under local anaesthesia for maximal safety:

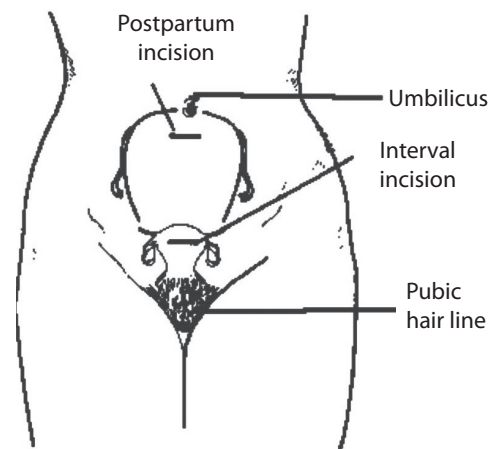
- Clients must be carefully screened and selected, using recommended eligibility guidelines.
- Client must be fit for anesthesia and the surgical procedure.
- The health facility must be properly equipped for the surgery and anesthesia as well as related emergencies.
- The health care provider/s should be trained and skilled in the surgical technique, use of appropriate anaesthesia, and in managing emergencies arising out of the same.
- All instruments, medicines and equipment as listed in Appendix I, must be checked to confirm that they are present and in optimal working order, before beginning the surgical procedure.
- Presence of an informed and signed consent of client should be confirmed. All staff must conform to recommended infection prevention practices.

Surgical Approach

Minilap tubectomy is performed usually by either of two approaches.

- **Sub-umbilical approach** is appropriate in the immediate postpartum period (Post partum sterilization or PPS).
- **Supra pubic approach** is appropriate for the following situations.
 1. Clients at any time in their menstrual cycle, provided it is reasonably certain that she is not pregnant using the Pregnancy Checklist. The surgery is preferably done at the end of a menstrual period or shortly thereafter, to ensure that the client is not pregnant.
 2. Most post abortion clients.
 3. Clients who are 42 or more days postpartum (i.e., once the uterus is fully involuted).

Incision Sites for Postpartum and Interval Abdominal Tubectomy



Subumbilical (Post Partum) Minilap Tubectomy

This section describes the evaluation and preparation of a client undergoing a sub-umbilical minilap tubectomy and the important steps of the procedure .

Evaluation of the Client

- A client requesting post-partum sterilization should have been counseled and assessed before arriving at the facility for delivery. Even so, additional counselling and assessment of her interest in and suitability for sterilization should again be done at the facility, before the client is transferred from the post-natal ward to the surgical area for sterilization.
- Another important consideration is the condition of the newborn. If the newborn is unwell, the sterilization procedure can be postponed from 48 hours up to a week after delivery, since the client's desire for permanent contraception may change if the infant dies or suffers from some chronic health problem.
- After the client is screened, found eligible and agrees to the procedure, confirm that she has not consumed solid foods for six hours, milk for 4 hours and fluids for at least two hours before surgery.
- The operating surgeon must:
 - Review the client's medical history and physical examination results from the medical record to verify eligibility
 - Verify the client's informed choice and consent.
 - Perform a physical examination to confirm the clinical findings in the medical record
 - Arrange a surgical gown for the client and give her private place to change. If a surgical gown is not likely to be available, the client should be told to bring along a clean garment which will help to preserve her modesty and also keep her warm.

- **A full bladder increases the risk of injury during abdominal entry; therefore, immediately before the procedure, the client's bladder should be emptied. The safest, most effective way to ensure an empty bladder is to ask the client to urinate immediately before she enters the operating theatre.**
- **Routine use of the catheter should be discouraged, since it may raise the risk of infection. A catheter should be used only if, once the client is on the operating table, palpation or inspection of the region suggests that the bladder is full.**

Positioning for Surgery

Position the client for surgery in the dorsal supine position. The height of the postpartum uterine fundus should be assessed to confirm that it is close to the umbilicus. (Fig. 8.1)

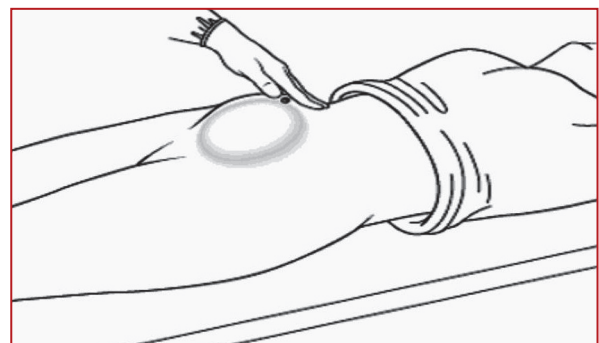


Fig. 1 : Positioning the client for sub-umbilical minilap tubectomy and assessing fundal height

Abdominal Preparation

- The operating area should not be shaved. The hair can be trimmed close to the skin with scissors if necessary.
- The operative site should be prepared immediately pre-operatively, with an antiseptic solution such as iodophor (Povidone iodine) or chlorhexidine gluconate (cetavalone).

Alcohol preparations should not be applied to the sensitive genitalia.

Iodophor and chlorhexidine are safe for use on mucous membranes and can be used to cleanse the vagina and cervix. Iodophors require 1 to 2 minutes to work which is the time needed for the release of free iodine which inactivates the micro-organisms.

- Using an antiseptic-soaked swab on a sponge forceps, clean the umbilicus and throw away the swab. Take a second swab, and, starting from the sub-umbilical incision area, move progressively out from the umbilicus in circular motion (Fig. 1). Swab at least a 12-cm circumference progressively in this manner;

Do not bring the used swab back over a cleaned area which may cause recontamination of the site with local skin bacteria.

- Antiseptic solutions should be liberally applied at least two times on and around the operative site, and the site cleansed thoroughly by gentle scrubbing.
- The excess antiseptic solution should not be permitted to drip and gather beneath the client's body as this may cause irritation.
- After preparing the operative site and allowing the antiseptic to dry, the area should be covered with sterile drape sheets.

Once four sheets are secured in position at right angles with towel clips, they will form a sterile window .

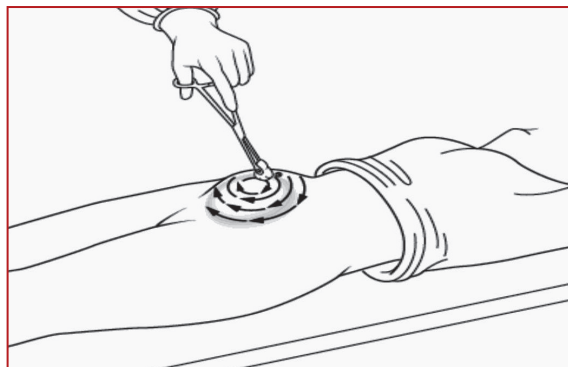


Fig. 2 : Preparation of operative site

At this moment, additional pain medication (e.g., Diazepam and Meperidine), according to the regimen selected, should be administered.

Selecting Incision Site

The best area for the sub-umbilical incision is beneath the umbilicus, just below the upper border of the palpable post-partum uterus. (Fig. 3)

This is because 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 also thin and flexible.

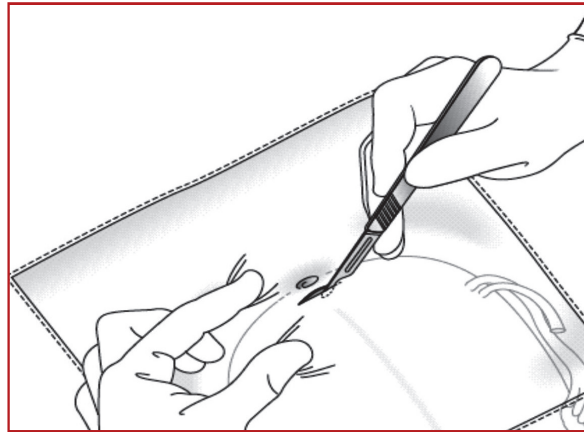


Fig. 3 : The subumbilical minilaparotomy: Incision site

Local Anaesthesia Infiltration

STEP 1: Using either one 20 ml or two 10 ml syringes loaded with 1% lignocaine, (2% xylocaine supplied should be diluted with equal amount of distilled water), raise a small skin wheal at the centre of the incision site and administer about 3-5 ml of the local anesthetic, just under the skin along both sides of the incision line.

STEP 2: Starting at the centre of the incision line and without withdrawing the needle, insert needle into the fascia at a 45° angle, with the needle directed slightly superior to the incision line. **Aspirate to ensure the needle is not in a blood vessel;** then withdraw the needle slowly while injecting 3–5 ml of lignocaine .Repeat on other side of incision line.

STEP 3: Insert the needle straight down through the rectus sheath to the peritoneum (see figure). Aspirate again to be sure the needle is not in a blood vessel and inject 1–2 ml of anesthetic into the peritoneal layer.

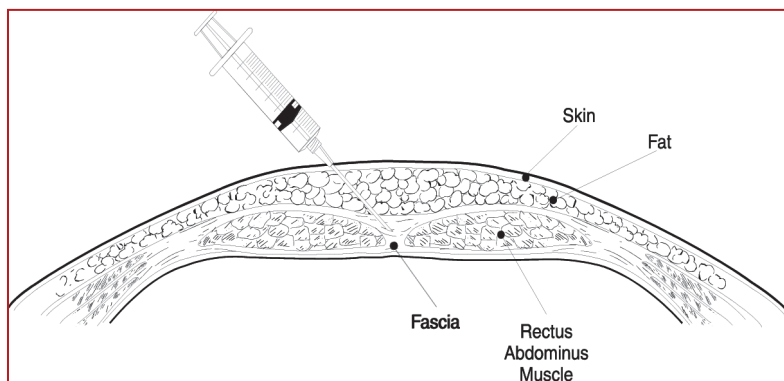


Fig. 4 : Infiltrating the Fascia (with Needle at 45° Angle)

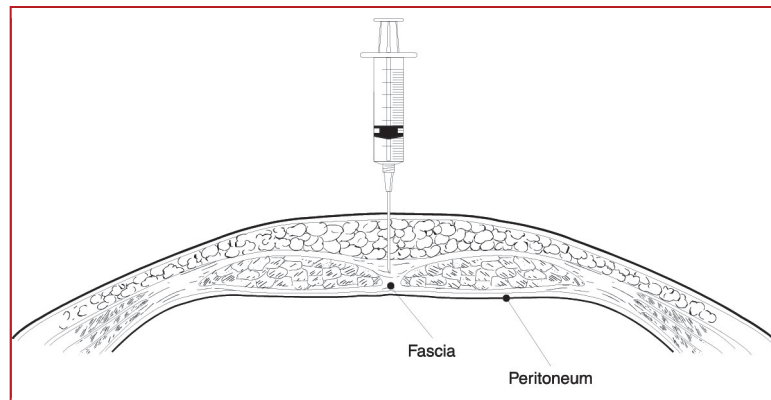


Fig. 5: Infiltrating the Peritoneum (Needle at 90° Angle)

STEP 4: Withdraw the needle and place on a sterile or high-level disinfected tray to prevent accidental needle stick injury. Keep a small amount of lignocaine in the syringe for use on fascia, peritoneum and tubes, if needed.

STEP 5: Massage the skin gently to spread the anaesthetic into the tissues. **Wait 2–3 minutes for the anaesthetic to take effect.**

STEP 6: Test the incision site for adequate anaesthesia using tissue forceps. If client can feel a pinch, wait 2–3 minutes more and retest the incision site for pain.

Abdominal Entry

Make a skin incision approximately 2 – 3 cm long, and open it only through the skin (fig. 6). Using a forceps or retractors, bluntly dissect the subcutaneous fat gently and precisely, to minimize tissue trauma and bleeding. Control bleeding from any vessel, if needed. Dissect subcutaneous tissue until the fascia is visualized and exposed with retractors.

In postpartum women, the abdominal wall in the sub-umbilical area is very thin. Therefore, dissection must be performed cautiously, to avoid injury to underlying structures.

To incise the fascia, place the table in a slight Trendelenburg position (20° or less), then grasp and elevate the fascia with Allis forceps in the midline of the incision at the inferior and superior portion. Using scissors, incise the fascia transversely. Extend the fascial opening slightly beyond the skin incision on both sides. (fig. : 7)

Due to diastasis of the rectus, there is no intervening rectus muscle under the umbilicus and in postpartum clients, the fascia and peritoneum usually adhere, making them one layer. Therefore, layer-by-layer dissection is usually unnecessary, since the surgeon generally enters the abdomen immediately after incising the rectus fascia.

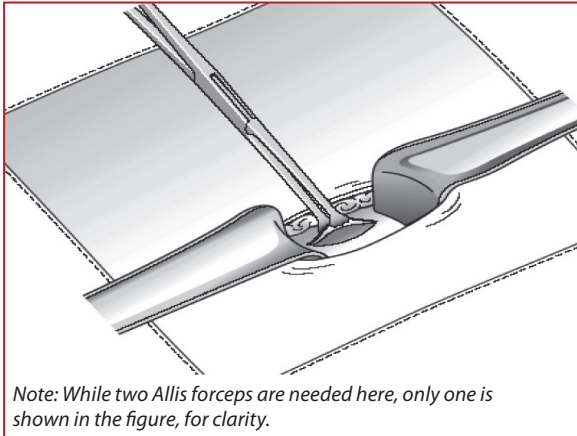


Fig. 6 : Entering the skin and grasping the fascia

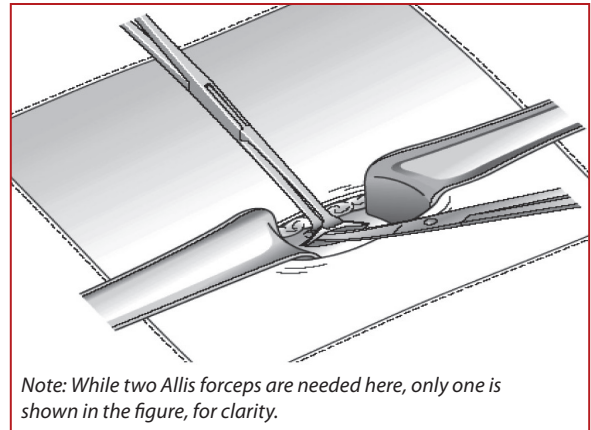


Fig. :7 : Dissecting the fascia

If the previous step did not provide entry into the abdomen, identify and elevate the peritoneum by grasping it at two points with hemo-static forceps.

To prevent injury to underlying structures, avoid using toothed instruments.

Once the peritoneum has been elevated, to protect the underlying viscera and structures from injury during incision, check that the bowel, bladder or omentum has not been grasped inadvertently with the peritoneum by palpating the tissue between thumb and finger.

To avoid grasping the bowels along with the peritoneum, be sure to ask the client to take a deep breath before you grasp the peritoneum. Before incising the peritoneum, look at or feel a fold of the grasped tissue, to confirm that it is the translucent peritoneum only and that abdominal contents are not adhering to it.

Once this has been excluded, make a small opening in the peritoneum with a scissors or hemostat.

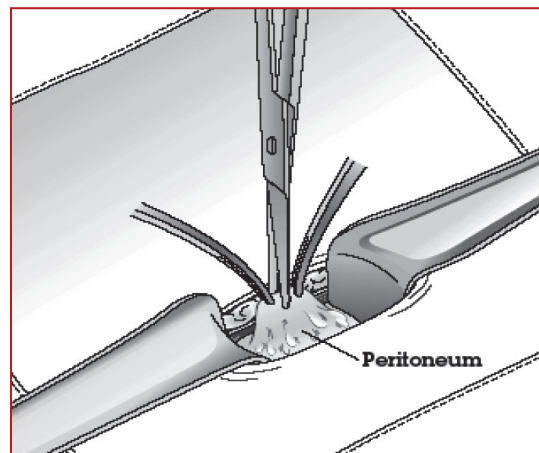
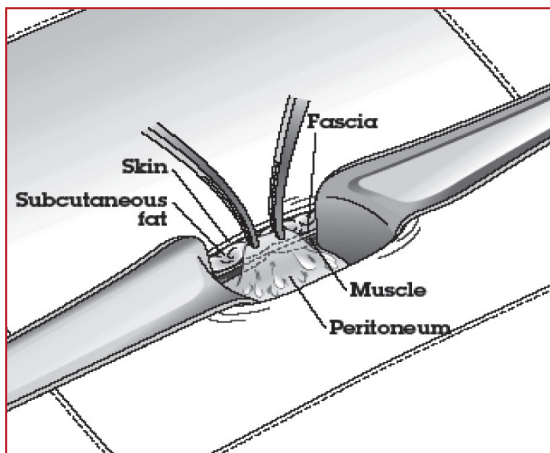


Fig. 8 : Grasping and Opening the Peritoneum

Note : In some clients, particularly those who are obese, the preperitoneal fat is abundant. This can cause difficulties during opening the peritoneum. Dissect slowly, without making unnecessary cuts, and try to identify the peritoneum before cutting.

Once entry into the abdominal cavity is confirmed, the surgical assistant should gently place the retractors inside the abdomen to maximally expose the uterus and tubes (fig. 9).

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

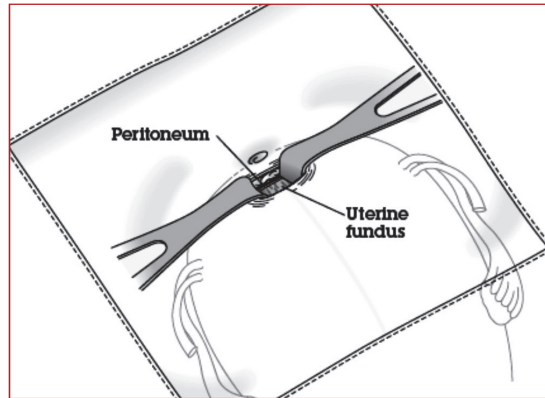


Fig. 9 : Using the retractors to expose the uterus and tubes

Delivering the Fallopian Tubes

One of the advantages of sub-umbilical access to the fallopian tubes is that the pliable skin allows the surgical assistant to move the incision to the sides, so that the tubes can be accessed where they are located anatomically. Also, the uterus can be manipulated from the outside, allowing the corneal end to be moved to the incision, thus providing easy access to the tubes. Using gentle pressure on the abdomen, push the uterus toward the opposite side of the tube being accessed while the surgical assistant positions the incision over the fallopian tube by gently moving and pressing down both retractors simultaneously (Fig. 10 a and 10 b).

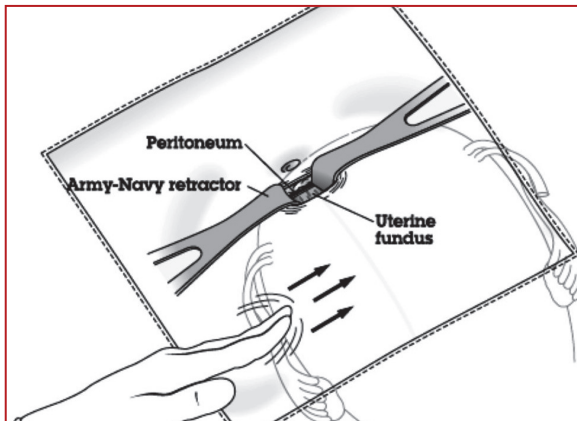


Fig. 10 (a) : Pushing the uterus toward the opposite side of the tube being accessed

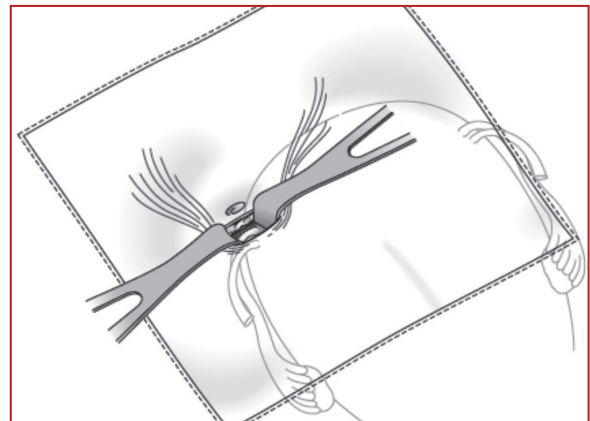


Fig. 10 (b) : Moving the incision to be above the tube being accessed

- Visualization of the uterus and tubes may be obscured by the omentum or bowel. If this is the case, ask the client to take a deep breath while you push the bowels gently out of the way using the retractors.
- Since the peritoneum has nerve endings, minimize pulling and tugging so as to prevent pain and vasovagal reactions (e.g., nausea, vomiting, and fainting).

Once the tube has been visualized, grasp it atraumatically with a baby Babcock forceps (fig. 11)

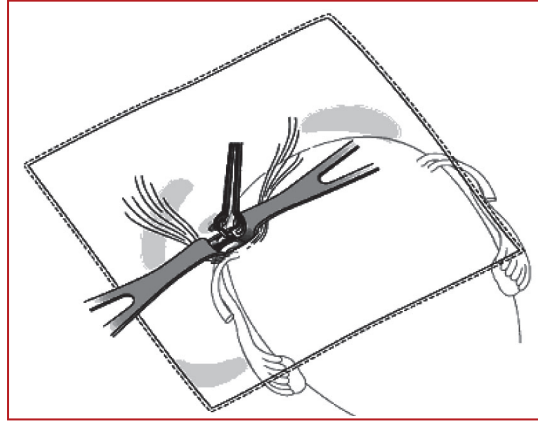


Fig. 11 : Grasping and identifying the fallopian tubes

Confirm the identity of the tube by following it to the fimbriated end (using the baby Babcock forceps with one hand and a delicate dissecting forceps with the other) and pulling the tube out gently until the fimbria can be seen. (Fig. 12 (a), 12 (b))

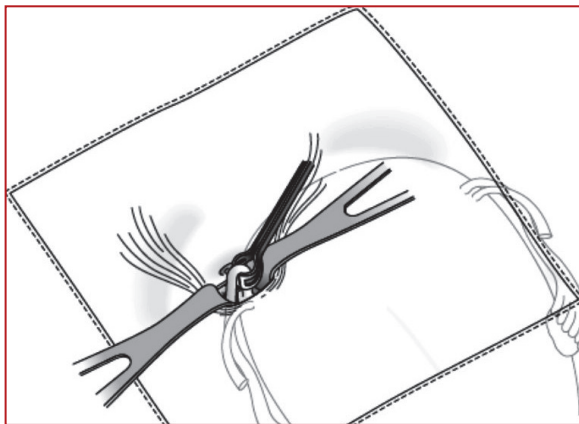


Fig. 12 (a) : Moving the tube to the opening

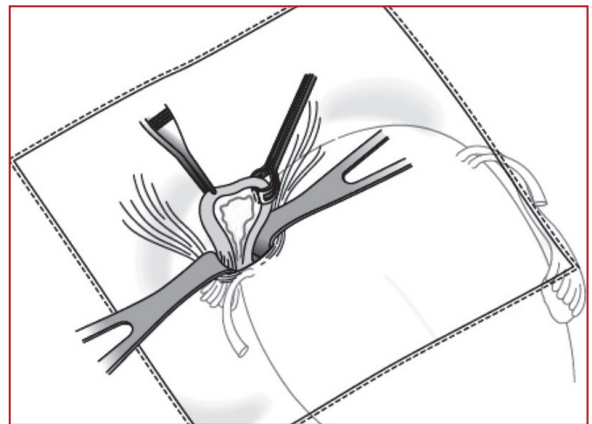


Fig. 12 (b) : Pulling the tube out and visualizing the fimbria

Neglecting this important step may lead to ligation of other structures (such as the round ligament) instead of the fallopian tube, which will result in failure of the procedure.

At this point, you are ready to ligate the tube and after the tube is ligated on one side, repeat the steps on the other side to ligate the other tube.

Occluding the Fallopian Tubes

Ligature and excision of the tube using the modified Pomeroy technique is the most commonly used occlusion method selected for occluding the fallopian tubes during minilap tubectomy.

The basic principles of the technique are to tie a knot onto a loop of an avascular area of the fallopian tube, excise a portion of the tube minimizing tissue handling and destruction, and use absorbable suture.

In the modified Pomeroy Technique, use a baby Babcock forceps to grasp and elevate a 2-cms loop of fallopian tube at its midsection (the isthmic portion), approximately 2 to 3 cm from the cornual portion of the tube.

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.

Position the baby Babcock forceps over an avascular portion of the mesosalpinx. Keeping the forceps in a vertical position, hold the tubal loop (fig.13).

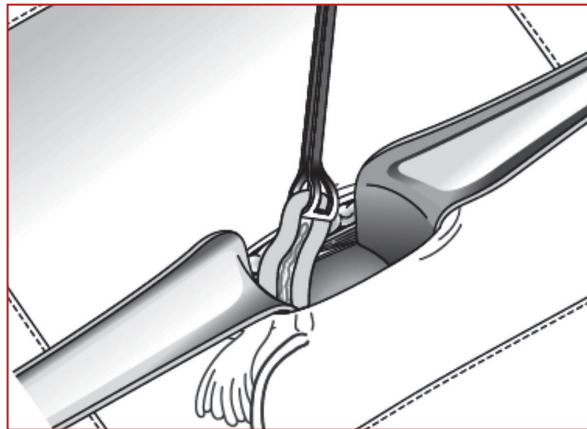


Fig. 13 : Holding the tubal loop with the baby Babcock forceps

Transfix using a surgical dissecting forceps and holding the tube by its distal side and passing a needle with absorbable suture number 0 through the avascular section of the mesosalpinx, taking care to avoid blood vessels (fig. : 14 a, 14 b, 14 c, 14 d).

Rapidly absorbable suture (chromic or plain catgut) is recommended, to allow the two cut ends of the tube to withdraw quickly from each other. This reduces the risk of failure as a result of spontaneous recanalization. Do not place ligatures near the fimbrial portion of the tube, since this again increases the potential for recanalization and failure.

Place an anchor tie around the proximal side of the loop of fallopian tube using a square knot. Tie the same suture on the other side of the looped tube, using a square knot.

Steps of modified Pomeroy technique

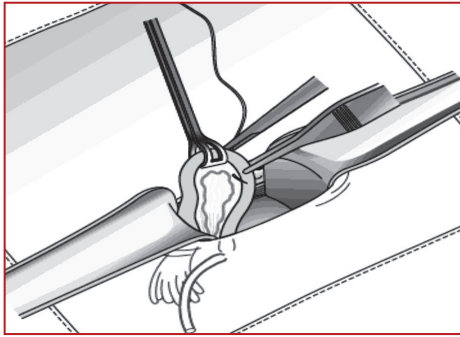


Fig. 14 (a) : Transfixing the suture

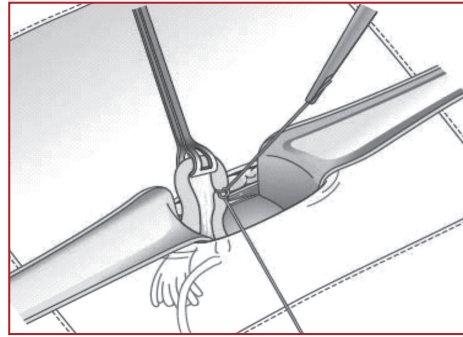


Fig. 14 (b) : Tying a square knot around the proximal side

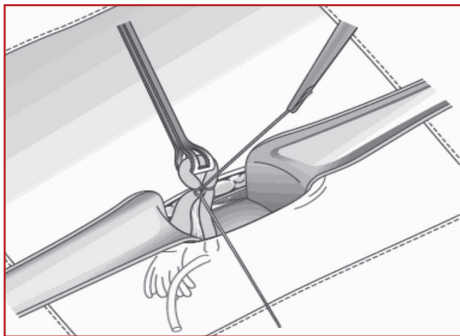


Fig. 14 (c) : Tying the distal side

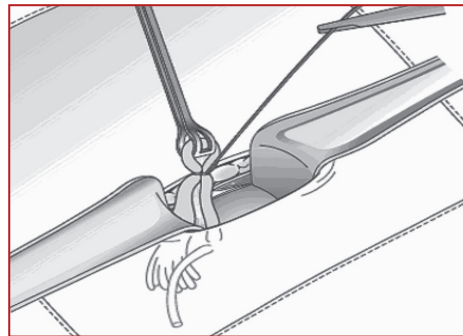


Fig. 14 (d) : Tying off the loop of the fallopian tube

After tying the loop of the fallopian tube as shown in the above figures, 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 scissors, leaving at least a 0.5-cm tubal stump above the knot. Cut the proximal side first and then the distal side of the tube (Fig 15 a, b).

Examine the stump for bleeding. Because some blood vessels of the mesosalpinx are caught in the ligature, hemostasis must be assured before the tube is released and returned to the abdominal cavity. (Fig. 16). Be sure to hold the tube gently and not pull it, as the pressure exerted could hide the bleeding. After examining the cut tubal stump to ensure that hemostasis has been achieved, cut the suture and allow the tube to return into the abdomen by releasing the hemostat.

At this point, access and deliver the second fallopian tube, as described in the previous section, and occlude it.

Cutting the fallopian tube

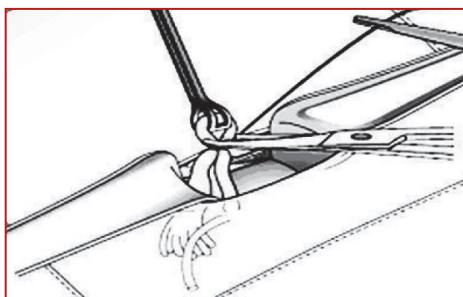


Fig. 15 (a) : Cutting the proximal side of the tube

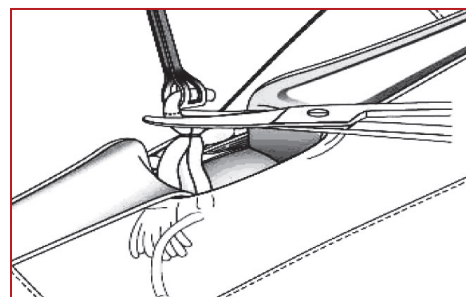


Fig. 15 (b) : Cutting the distal side of the tube

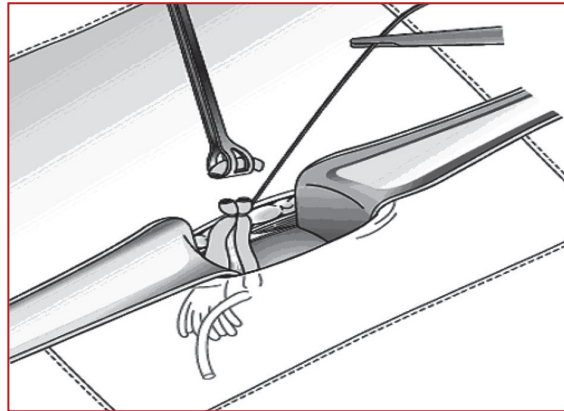


Fig. 16: Checking tubal stump for bleeding

After both fallopian tubes have been occluded and put back to the abdomen, change the table to its initial horizontal position if the Trendelenburg position was used.

Closing the Abdomen

Before closing the abdomen, visually explore the surgical area to exclude the possibility of any injury or bleeding. The abdomen is closed in two layers - the fascia and the skin.

Peritoneal closure is not necessary, as evidences has 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 stitch) suture with absorbable suture number 0. Two or three stitches may be needed, depending on the length of the incision and the extent of superficial bleeding or the need to control bleeding.

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.

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.

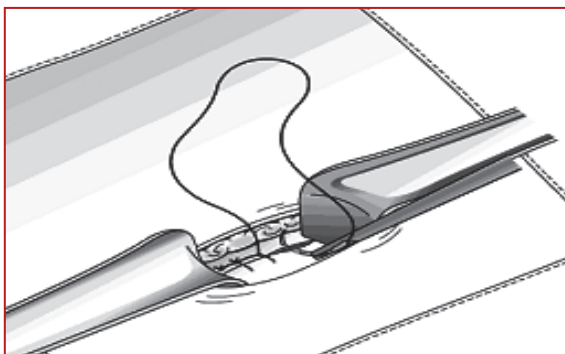


Fig. 17 : Closing the fascia

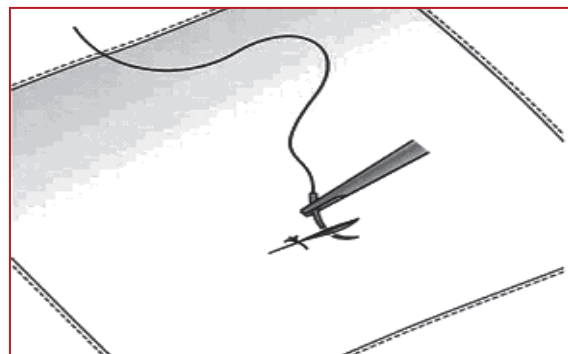


Fig. 18 : Closing the skin

Finally, dress the closed incision before removing gloves, gowns, and drapes.

Suprapubic Minilap Tubectomy

Client Evaluation and Client Preparation follows the same principles as described under Sub-umbilical Minilap Tubectomy.

Client Positioning for Interval Minilap

Positioning the client for a suprapubic procedure should involve considerations of both client comfort and ease of access to the surgical area. The most common position used is the dorsal supine position. (Fig 19)

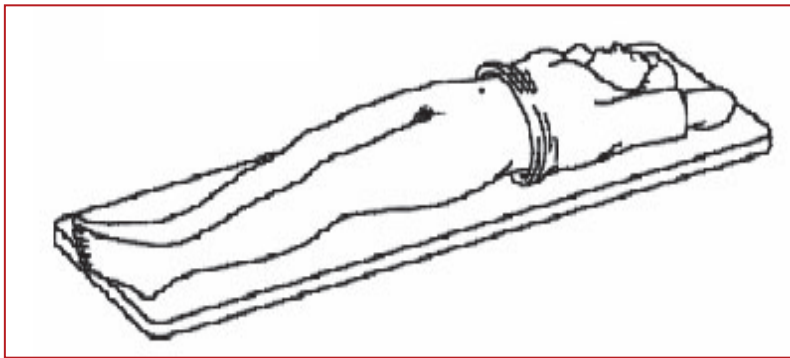


Fig. 19 : Dorsal Supine Position

Preparing the Abdominal Area

Cleaning and draping the abdomen is done as described for sub-umbilical minilap tubectomy.

For suprapubic procedures, skin preparation should include the upper part of the pubis and thighs. (Fig. 20)

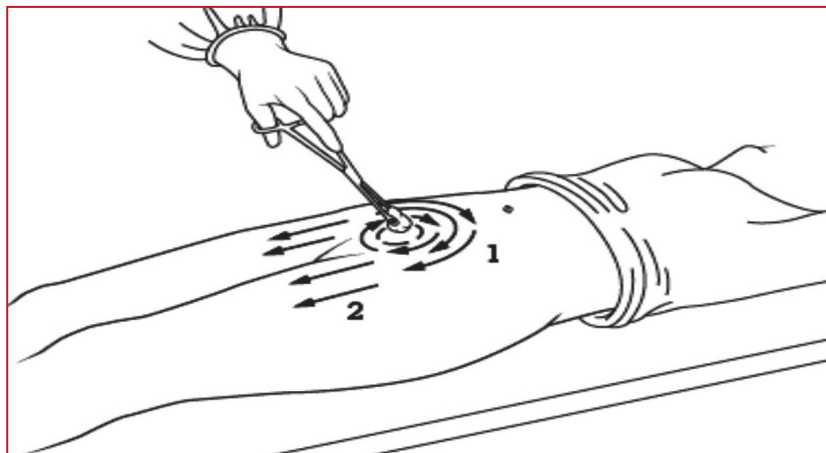


Fig. : 20

Incision Site

The best area for the supra pubic incision is 2 to 3 cm (or 1 in.) above the border of the pubis. In this area, an anatomical fold at the union of the pubis and the abdominal wall is generally thinner, which facilitates the opening of the abdomen. (Fig. : 21)

Although the incision can be vertical or transverse, the transverse incision is most commonly used and is described here.

The transverse incision is commonly used because:

- It heals more rapidly.
- It is associated with less pain during the healing process.
- Incidence of opening of the wound is lower.
- The scar that forms is less visible.

A vertical incision is indicated when there is an existing midline scar.

Abdominal Entry

Infiltrate the abdominal wall, following the local anesthesia infiltration technique described earlier.

After confirming the effectiveness of anaesthesia, by pinching the skin with a toothed dissecting forceps, pull the skin taut to make an incision approximately 2 to 3 cm (maximum of 5 cm) long, centered, above the pubic symphysis.

Using a forceps or the small blade of the retractor (always working in the midline), bluntly dissect the subcutaneous fat gently and precisely, to minimize tissue trauma and bleeding.

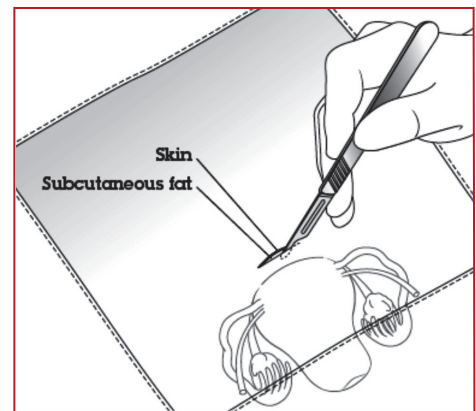
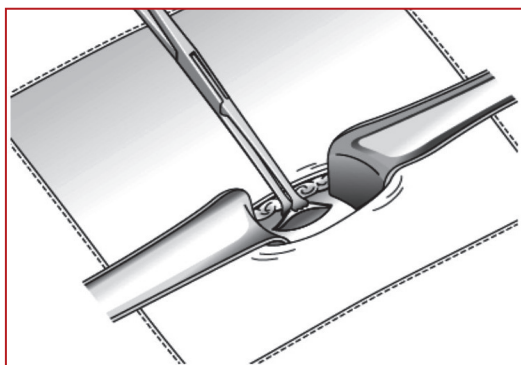
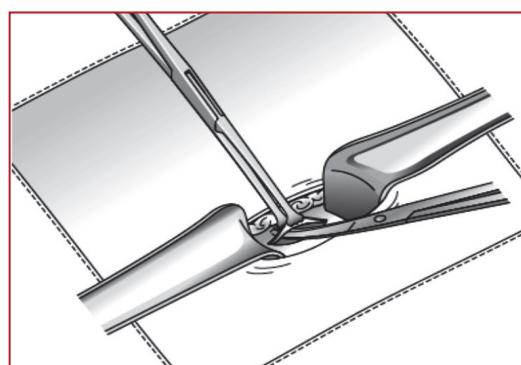


Fig. 21: Incision site

Use of sharp dissection increases the risk for more bleeding. Thus, sharp dissection should be avoided.



Note: While two Allis forceps are needed here, only one is shown in the figure, for clarity.



Note: While two Allis forceps are needed here, only one is shown in the figure, for clarity.

Fig. 22 : Entering the abdomen: Grasping and dissecting the fascia

Dissect subcutaneous tissue until the anterior rectus fascia is visualized and exposed. Incise the fascia transversely, 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 . With the Allis forceps, grasp the fascia in the midline of the incision, at the inferior and superior portion , and cut transversely with scissors (Fig 22). Extend the fascial opening on both sides so that it is slightly larger than or about the same length as the skin incision.

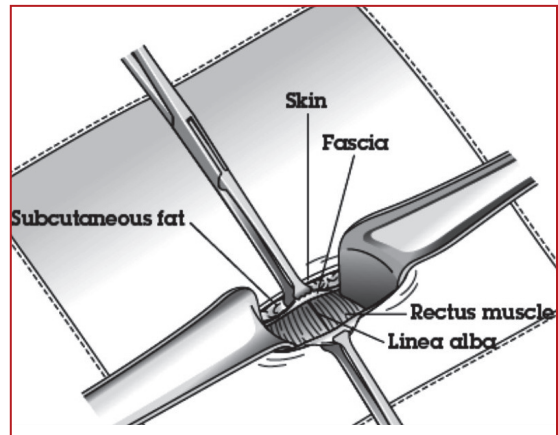


Fig. 23 : Visualizing the muscle layers

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). Retractors should be pulled horizontally to keep the incision open. At this time, one of the Allis forceps can be removed.

Bluntly separate the rectus muscles vertically at the linea alba, entering through the linea alba with a hemostat or closed scissors and bluntly dissect the preperitoneal fat needed to expose the peritoneum. (Fig. : 24)

Entry into the abdominal cavity is safer when the operating table is placed in the Trendelenburg position (with the head of the table tilted downward 20° or less).This position shifts the bowels out of the operative site, thus minimizing the risk of injury.

To minimize the amount of time the client spends in this position, a member of the surgical team should place the client in this position just before incising the peritoneum, and should return her to the horizontal position as soon as tubal occlusion is completed.

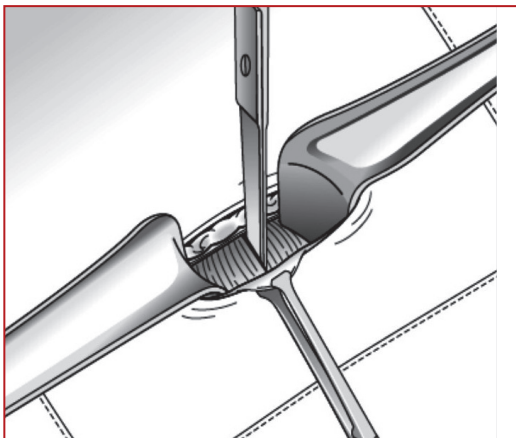


Fig. 24 (a) : Separating the rectus muscles

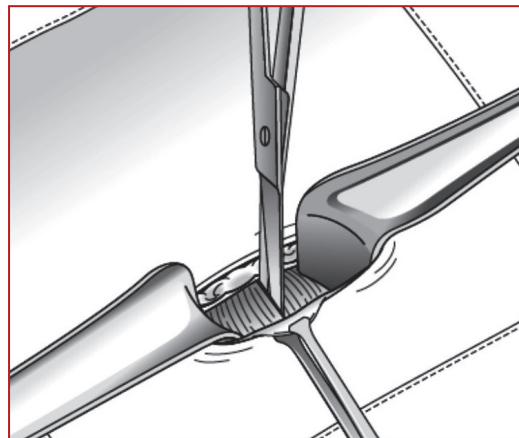


Fig. 24 (b) : Opening the scissors to separate the muscles

To incise the peritoneum, elevate the peritoneum by grasping it at two points with hemostats. Avoid using toothed instruments to prevent injury to underlying structures. (Fig 25)

If any difficulty is experienced in opening the peritoneum, it may be preferable to incise superiorly (away from the pubic bone) to avoid the bladder. (fig 26)

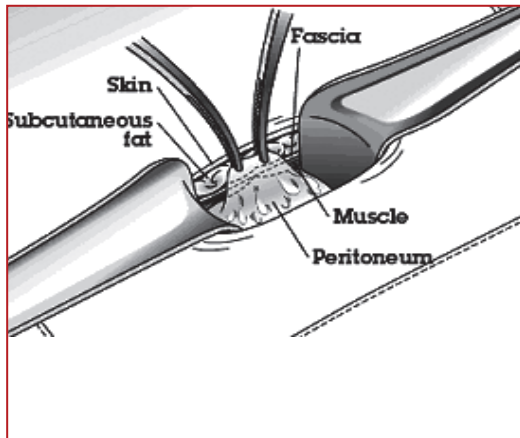


Fig. 25 : Grasping the peritoneum

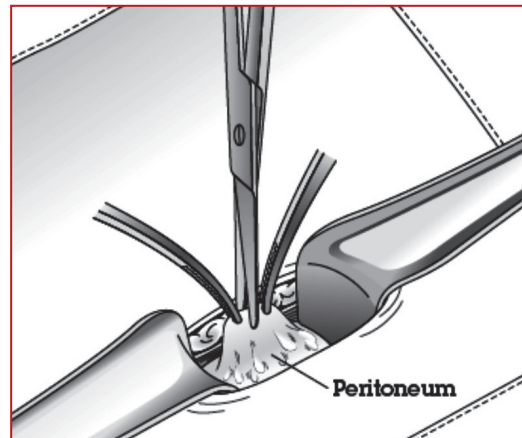


Fig. 26 : Opening the peritoneum

Take care to avoid the bowels or bladder whenever the peritoneum is incised.

Stay directly under the incision in the midline.

The surgical assistant must keep the retractors horizontal (i.e., parallel to the abdomen) and must simultaneously pull them up. This ensures better visibility of the abdominal cavity and minimizes the possibility of trauma to the interior abdominal wall.

Locating the Fallopian Tubes

Accessing and delivering the fallopian tubes requires manipulation of the uterus and tubes to position the fallopian tubes near the incision area, which allows the surgeon to access them without difficulty.

A nurse can elevate the uterus per-vagina by pushing the uterus up through the posterior fornix of the vaginal vault with two fingers.

If the client is too fatty and the fundus cannot be reached easily, extend the incision sideways 1cm more.

STEP 1: Insert index finger/index and middle finger of one hand inside the incision and feel for the fundus of the uterus.

STEP 2: Slide the finger/s along the fundus laterally up to the cornu and then posteriorly and feel for the tube of one side.

STEP 3: Trace the tube laterally with finger/s, hook it, lift the tube and roll it against the anterior abdominal wall.

If using two fingers the roll tube between them to confirm that it is the fallopian tube (the fallopian tube is soft and mobile unlike the round ligament).

Since the fallopian tubes have a peritoneal layer that contains nerve endings, clients often feel pain when the fallopian tubes are grasped.

To prevent pain, spray 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. Wait 30 to 60 seconds for the anesthetic to take effect.

STEP 4: Holding the tube between the two fingers or hooking over one finger gently bring it out of the abdominal incision.

STEP 5: Gently grasp the mid-portion of the tube with the Babcock's forceps.

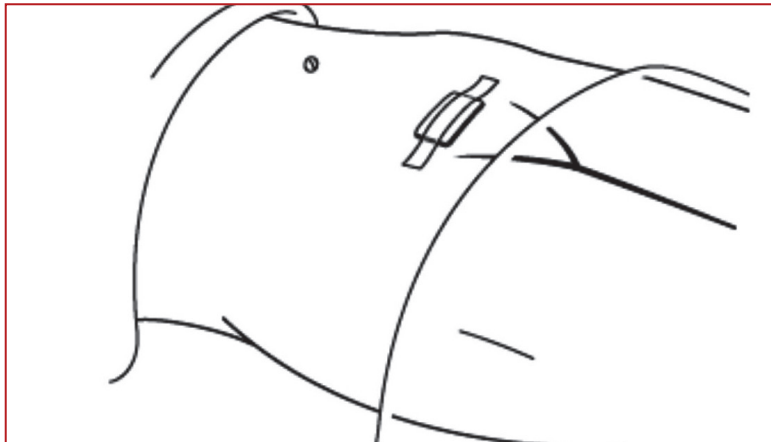
STEP 6: Identify the tube by tracing the tube till the fimbrial end laterally.

Confirm that, the tube and not the round ligament has been ligated, by identifying the lumen in the portion of the tube which has been removed.

Occluding the Fallopian Tubes and closing the abdomen

The procedure and steps to be followed are already described in Sub-umbilical approach (Post partum sterilization)

Dressing the incision.



Post-Operative Recovery, Discharge and Follow-Up

Monitoring the client after surgery is a very important function because it is during this period that any effects of surgical trauma or other post-operative complications become apparent.

Although nurses or other staff members will carry out the tasks related to post-operative recovery and discharge, the operating doctor is ultimately responsible for the quality of postoperative care.

Post-Operative Care

The person assigned this duty have the following responsibilities:

- Receive the client from the operating theatre; review the client record.
- Make the client as comfortable as possible (handle the woman gently when moving her).
- Make sure that an over sedated client is never left unattended.
- Monitor the client's vital signs - check blood pressure, respiration and pulse every 15 minutes for one hour following surgery or till the patient is unstable or not awake. Thereafter, check vital signs every 30 minutes until the client has fully recovered from the effects of the anaesthesia , for at least 2 hours before discharge.
- Record vital signs in the client record each time they are checked.
- Check the surgical dressing for oozing or bleeding.
- Administer drugs or treatment for symptoms according to the doctor's orders.
- Provide water, tea and fruit juices when the client feels comfortable.

The client may be discharged when she is able to retain oral fluids, urinate, converse, dress herself, and walk around which usually occurs within two hours unless general anaesthesia has been used.

After sedation has worn off and before discharge, a trained staff member should repeat the postoperative instructions to the client or designated accompanying person. A written copy of the postoperative instructions should also be provided.

Determining when the client is ready for discharge

The client may be discharged when the following conditions are met:

- a. After at least four hours of procedure, when the vital signs are stable and the client is fully awake, passed urine, can walk, drink or talk.
- b. The client is seen and evaluated by the doctor.
- c. When a responsible adult is ready to accompany the client after discharge.

A client may require overnight observation in the following conditions.

- Unable to retain fluids (vomiting).
- Unable to ambulate (unsteady when standing).
- Shows signs of possible abdominal bleeding.
- Shows signs of hypovolemia.

Discharge

- Before being discharged, the client should be instructed to return for routine follow-up within one week,
- She should be advised to return at any time if warning signs arise and staff should discuss these warning signs with the client and with the person accompanying the client from the facility, and should verify their understanding of this information.
- The client should have received information on follow-up and warning signs in advance; at this time, it should be reiterated and the person in charge of the client's discharge should make sure that she understands it.
- Oral analgesics can be prescribed or given, to be taken during the first two days following the procedure.

There is no need to prescribe antibiotics.

- The client is to be provided with a discharge card, indicating name of the institution, date and type of surgery, method used, date and place of follow-up (**Annexure 5**).
- Both written and verbal post-operative instructions must be provided in the local language ie
 - a. Rest for the remaining day and resume light work after 48 hours
 - b. Use medications as instructed.
 - c. Resume normal diet as soon as possible.
 - d. Keep the incision area clean and dry.
 - e. Do not disturb or open the dressing.
 - f. Bathe after 24 hours following the surgery, but if the dressing becomes wet, it should be changed so that the incision area is kept dry until the stitches are removed.
 - g. In the case of interval sterilization the client may have intercourse whenever she feels comfortable.
 - h. She must report to the doctor or clinic if there is excessive pain, fainting, fever, bleeding or pus discharge from the incision, not passed urine, not passed flatus and feels bloating of abdomen.
 - i. She must return to the clinic, if there is any missed period/suspected pregnancy within two weeks of missed period.
 - j. Instructions should be given on where to go for routine and emergency follow-up.
 - k. If there are any questions, the client should contact the health personnel or doctor at any time.

Signs of Post-Operative Complications

The staff should be able to recognize and respond to the following signs of distress:

- Excessive somnolence.
- Respiratory rate of less than 10 per minute.
- Hyperventilation.
- Systolic blood pressure of less than 90 mm mercury.
- Rapid pulse rate (over 90 per minute) or weak pulse.
- Pallor or cyanosis.
- Inability to retain fluids (vomiting)
- Inability to urinate
- Inability to ambulate (client is unsteady when standing)
- Abdominal distention.

Transfer of Client Records

All client records should be maintained at the service site where the procedure took place.

If the follow-up visit will take place at another facility, the client should be given a card for the follow-up provider. The card should state the date of the procedure, the type of procedure and any special instructions. If it is necessary to transfer a copy of the client's records, the original should be kept at the facility where the surgery took place.

Follow-Up

The health worker should visit the tubectomy client at home within 48 hours of discharge.

Alternatively, the client should report to the clinic.

The next follow-up visit should preferably occur on the seventh day after surgery (or as early as possible after 7 days) and should include an examination of the operative site, suture removal (if non-absorbent sutures were used) and any other relevant examination as indicated

Subsequent follow-up visit should be made after either one month or the next menstrual period, whichever is earlier. During this follow-up visit the staff assesses the client to determine if she has any side effects or complications or dissatisfaction related to the surgery. The client is treated or referred as indicated.

Emergency Follow Up-Clients making an emergency follow-up visit should receive immediate attention. Staff should be alert to the possibility of internal bleeding, bowel injury or infection.

If the woman had surgery at another health facility, the medical records may not be available. The staff member conducting the interview should obtain chronological information covering all events since the day of surgery. Complications and treatment should be reported to the facility where the tubectomy was performed.

1.5.2. Certificate of Sterilization

Certificate of sterilization should be issued after one month of the surgery or, after the 1st menstrual period by the Medical Officer of the facility.

Complications of Abdominal Tubectomy and Management

Overall, minilap tubectomy is a safe procedure and few women experience complications. Major complications occur in less than 2% of all cases either due to anaesthesia or due to faulty surgical technique.

Emergency management preparedness is a vital and absolutely necessary component of minilaparotomy for female sterilization services.

The following steps should be taken when a complication arises during the procedure

- Adequate monitoring of vital signs
- Identify the problem immediately.
- Take prompt action based on the nature of the problem.
- Suspend the surgery till the client is stable
- Consider hospitalising the client for observation.

Complications can occur during the procedure or following the procedure

Intra-Operative Complications and Management

- a. **Nausea and Vomiting** – Ondansetron (4 mg) or Metoclopramide (10 mg) may be given IM or IV.
- b. **Vaso-vagal attack** – Raise the leg end and lower the head end and give oxygen. Administer atropine (0.6 mg) IV if there is bradycardia. This can be repeated if the baseline pulse rate is not achieved within 1 to 2 minutes.
- c. **Respiratory depression**- Keep the airway patent; assist breathing using manual resuscitation equipment with oxygen; assess the circulation by monitoring pulse, blood pressure, respiration and other supportive therapy to be given as indicated.
- d. **Cardio-respiratory arrest**- Details of the sequential management of cardio respiratory arrest is given in Annexure 8.
- e. **Uterine perforation** due to introduction of uterine elevator (if it is used) from below needs to be repaired immediately if there is bleeding or these patients need to have further hospital observation to ensure they are stable.
- f. **Bleeding from the mesosalpinx** can be treated through laparoscope with cautery or ring/clip application. Alternatively, the bleeding should be controlled immediately by laparotomy.
- g. **Injury to the urinary bladder**- Must be closed in two layers and self-retaining catheter should be inserted in bladder for 7 days or as long as necessary.

- h. Injury to intra-abdominal viscera** (i.e., small or large bowel) and blood vessels- must be repaired immediately and I-V line maintained. If the operating surgeon is not confident of repairing, he/she must ask for help from a surgical colleague .
- i. Convulsions and toxic reactions to local anaesthesia-** The foremost priority is to maintain patency of airway and give 100 per cent oxygen inhalation. If the convulsions persist, administer Injection Diazepam 5-10 mg IV. Administration of IV fluid is not generally required, but may be given if necessary.

Surgery should be stopped and the patient allowed recovery. Subsequent surgery should be performed at a centre with all facilities.

Post Operative Complications and Management

- a. Wound sepsis-** Small stitch abscess is to be treated with drainage and dressings. However, severe sepsis needs opening the incision and drainage of the pus followed by dressing, antibiotics and analgesics.
- b. Haematoma in the abdominal wall-** A small non-expanding, non infected haematoma will resolve with no therapy, while a large one, particularly if infected, may need drainage and treatment with antibiotics.
- c. Intestinal obstruction, paralytic ileus and peritonitis-** The client should be hospitalized if she is not already in hospital. Keep the patient nil orally, on nasogastric suction, IV fluids , antibiotics and analgesics as indicated and refer to a higher centre, if required.
- d. Tetanus-** If tetanus is detected, the patient must be transferred immediately to a suitably equipped higher centre for treatment
- e. Incisional hernia-** a rare complication that needs surgical treatment.

Complications not related to Sterilization

- a. Menstrual irregularities (for example, menorrhagia, and scanty period) sometimes occur. But, these are not complications of sterilization. Reassurance and treatment according to the cause is sufficient in most cases.
- b. Chronic pelvic inflammatory disease- usually presents itself as lower abdominal pain and requires treatment with bed rest, antibiotics and analgesics.
- c. Psychological problems (e.g., depression) - Discussion of the problem, clarification of the role of sterilization and answering questions are important.

Failure of Tubectomy

Failure of the procedure leading to pregnancy may be due to either technical deficiency in the surgical procedure or spontaneous re-canalization. The client should be advised to report to the facility immediately after missed periods.

She should be offered MTP and repeat sterilization surgery or be medically supported throughout the pregnancy if she so wishes. Ectopic pregnancy must be ruled out as tubectomy predisposes to this condition.

Some Unforeseen Situations During Minilap Tubectomy

Tubo ovarian masses

These may cause difficulty in mobilizing the tubes and if dissection is attempted, can result in excessive bleeding.

Dense adhesions due to previous surgeries

If tubes are embedded in thick adhesions, they are best left alone as dissection of adhesions can cause haemorrhage and/or post operative infections.

PID or Pelvic tuberculosis

This may cause a plastered pelvis or frozen pelvis with inaccessible tubes.

Highly vascular tubes

With large vascular or venous formations, it may be difficult to get an avascular portion of the tube and there is more likelihood of haemorrhage.

Congenital absence of tubes

This is rare. By tracing over the fundus, absence of tubes can be detected. Counselling of client is important and post operative ultrasound and/or hysterosalpingogram may be advised for confirmation.

Tubal pathology

Cases with hydrosalpinx or pyosalpinx, edematous tubes, haemorrhagic corpus luteum, ectopic pregnancy or malignancy should be documented and referred to a higher centre.

Malignancy

Malignancy of tubes, ovaries and uterus if found, should be documented. Tubectomy can be done if feasible but referral to a proper centre is mandatory.

Unsuspected pregnancy

Patient should be counseled about the presence of the unsuspected pregnancy and what her options are. Separate consent should be obtained for MTP. Pregnancy test may be done and, if possible, an ultrasound examination is also recommended. If she is willing, tubectomy can be done but proper documentation and follow up should be assured.

Quality Minilap Tubectomy

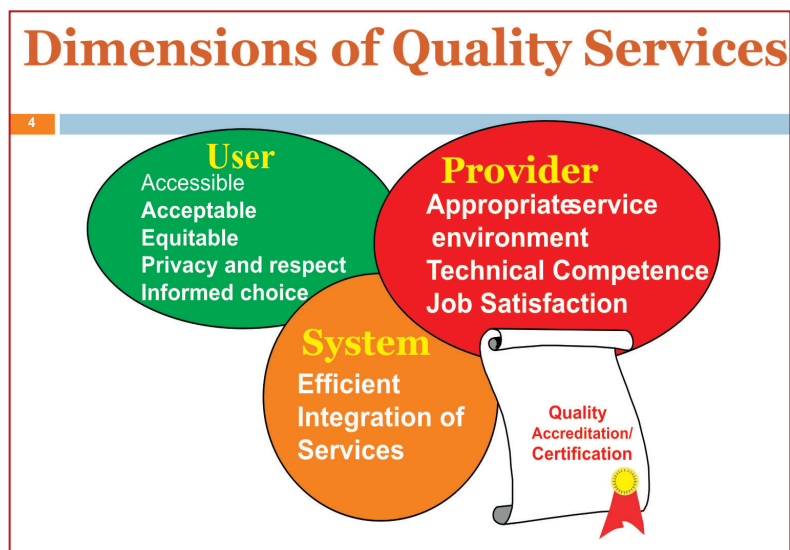
Quality of care is defined as 'attributes of a service program that reflects adherence to professional standards, a congenial service environment and satisfaction on the part of the user'. It is the way in which individuals and clients are treated by the system providing services.

Quality in family Planning includes offering a range of services that are safe, accessible, affordable and effective and that satisfy clients' needs with minimum of effort, waste and rework. It can also be defined as "the way clients are treated by the system".

Benefits of Improving Quality

Assuring good quality of services is an ethical obligation of health care providers. Studies have shown that improving the quality of services offers practical benefits to family planning clients and programs. These benefits include:

- Safety and effectiveness,
- Client satisfaction resulting in longer continuation,
- Wider use of contraception,
- Job satisfaction for providers,
- Better program reputation and competitiveness
- Expanded access to services



Principles of Good Quality

Quality of care frame work should be focused on the rights of clients and needs of the service providers

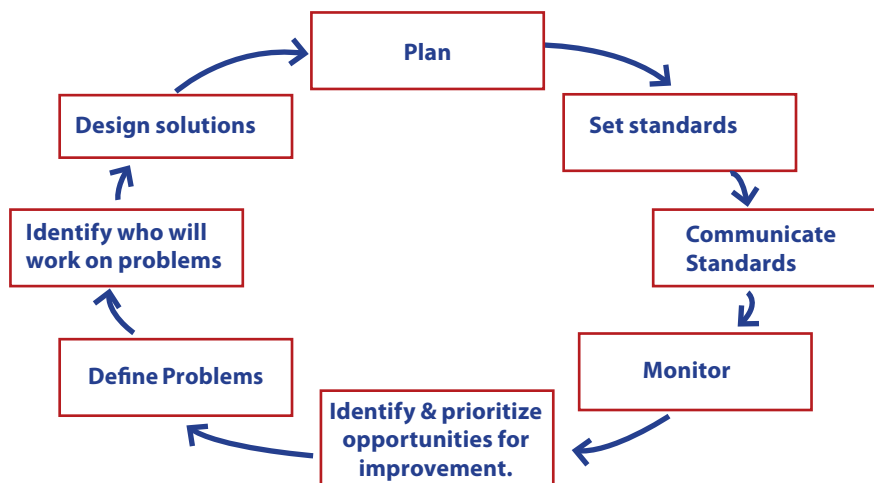
Clients have the right to:	Providers have a need for:
<p>Clear information- accurate, appropriate, understandable, and unambiguous.</p> <p>Access to services - Convenient location, distance and timings, with no barriers and discrimination.</p> <p>Informed Choice - voluntary and well considered decision based on complete information.</p> <p>Safe services provided as per standard delivery guidelines and protocols by Skilled provider.</p> <p>Privacy and confidentiality - for assuring client satisfaction.</p> <p>Dignity, comfort, and free expression of opinion</p> <p>Continuity of care: system of delivering follow up care.</p>	<p>Information and training on technical issues, updated regularly.</p> <p>Guidance through service guidelines, SOPs, checklists and supervision.</p> <p>Supportive working environment</p> <ul style="list-style-type: none"> • Respect and recognition from co-workers, managers, clients, and community. <p>Infrastructure, supplies, equipment –appropriate physical facilities, adequate supplies and working equipments.</p> <p>IEC materials- adequate supply of appropriate materials for community awareness.</p> <p>Record keeping – as good monitoring tool to assure the quality of services.</p>

Quality Assurance

Quality Assurance (QA) is a cyclical process involving assessment, leading to improvement, followed by further assessment and improvement. It is designed to objectively and systematically monitor and evaluate services offered to clients in accordance with pre-established standards and to resolve identified problems and pursue opportunities for improving services, leading to client satisfaction.

Objective of Quality Assurance-: Move from “ACTUAL PRACTICE” to “DESIRED BEST PRACTICE”.

Steps in quality assurance circle



The various steps for ensuring the quality services:

1: Setting Standards

Setting standards of care in these areas helps clinicians and managers assess and improve the quality of services being offered.

As a guideline framework some of the performance standards are mentioned below.

Sl. No.	Key areas	Performance standards
1	Human and Physical Resources	<ul style="list-style-type: none"> The provider is available, trained and competent to give the service. The facility has enough space to provide the services. The clinic has Infection Prevention supplies. Sufficient forms for record keeping and reporting. Availability of sufficient contraceptives, essential drugs and medical supplies.
2	Client focused IEC materials for Family Planning	<ul style="list-style-type: none"> The clinic has informational posters or display on the family planning services offered and clinic timing. There is information on client's rights regarding family planning. The clinic has flip charts/ IEC material and samples of family planning methods for counselling.
3	Infection Prevention practices	<p>Standard Universal Precautions of infection prevention include:</p> <ul style="list-style-type: none"> Hand Washing. Self protection such as wearing gloves and physical barrier (Attires). Safe Work Practices (Prevent injuries from sharps). Maintain correct environmental cleanliness. Correct processing of instruments and other items. Proper waste disposal practices and handling, transporting and processing used/ soiled linens correctly.
4	Family Planning Services/New Client –General Counselling	<ul style="list-style-type: none"> The provider uses adequate interpersonal communication skills during the entire visit. Gives information about the contraceptive methods available in the clinic and confirms the woman's choice and Informed consent. The provider rules out pregnancy Assesses the woman's medical eligibility
5	Management Systems	<ul style="list-style-type: none"> Availability and use of routine protocols/ instructions for the delivery of Family planning services. The clinic has a simple FP client record system. The records are reviewed and analyzed regularly.
6	Follow up Visit and Management of side effects and complications	<ul style="list-style-type: none"> The provider verifies the woman's satisfaction with the method. Identifies and efficiently manages the side effects or problems The provider gives instructions about the return and/ or follow up visits.

The standards in the tools tell providers not only "what to do" but also "how to do".

Step 2: Assessing Quality of Services

Quality assessment involves gathering data to determine the level of achievement of standards set in the Guidelines. The assessment process includes: specifying the indicators of quality, specifying the data that should be collected to measure the indicators, and identifying strategies for collecting and processing the data.

For assessing and ensuring the quality of sterilisation services, Quality Assurance Committees are formulated and functional at different levels of Health system.

Central Level

Monitoring cell constituted by the Technical Officers of the Family Planning Division of the MOHFW, and officers of the Monitoring and Evaluation (M&E) Division, Government of India who will be responsible for directing and steering the quality assurance activities

Quality Assurance Committees (QACs); State and District levels

Quality Assurance Committees (QACs) have been formed at the state and district levels to ensure that the sterilisation services are provided as per the standards laid down in the Manual “Standards in Female and male sterilisation” developed by Government of India. The members of the committees and the responsibilities are detailed in the manual “Quality Assurance Manual” by GOI.

Quality Circles- Facility Level

Sterilization services are being provided to the clients at various government and accredited private/ NGO outlets. At each service delivery site, sterilization service needs to be monitored and reviewed periodically. This task can be performed by service providers from the facility itself through a process of self-assessment that will identify issues related to quality improvement, help in resolving the identified problems, recommend solutions, and ensure that high-quality services are provided.

For institutions such as District Hospitals/Civil Hospitals/Sub-divisions/Referral Hospitals/CHCs, **Quality improvement committees (QIC)** comprising a team of medical, paramedical, and other support staff should be constituted as per guidelines in the Quality assurance manual, depending on the size of the institution being monitored, for reviewing the quality of services periodically.

Responsibilities of the QIC :

- Identifying critical quality processes in light of the standards for sterilization;
- Reviewing the processes with the help of the checklists on client case audit / facility (Annexures)
- Facility audit/observation of asepsis and surgical procedure (Annexure 4);
- Developing a work plan listing activities for improvement and putting this into action.

The committee should meet quarterly; and minute the proceedings.

All cases of failure and complications, major or minor, arising during surgery or post surgery must be documented and a copy sent to the district QAC, timely, in the recommended formats. (Refer Quality Assurance Manual). The district QAC will in turn be responsible for communicating such information to the concerned insurance service providers for compensation.

Any cases of Litigation against the service provider also should be intimated to the QAC to provide Insurance coverage and legal protection for the empanelled provider.

Doing the right thing right, right away i.e without any delay, quality can be achieved.

In sum, it is vital to objectively and systematically monitor and evaluate mini-lap tubectomy services from time to time in accordance with pre-established standards, resolve identified problems, and pursue opportunities to improve client care so that high-quality, safe, and effective services that satisfy clients' rights are provided and providers' needs are met.

ANNEXURE

ANNEXURE

Application for Sterilisation Operation and Informed Consent Form

Name of the Health Facility:

Beneficiary Hospital Registration Number:.....

Date.....

1. Name of the Acceptor: Shri/Smt.....

2. Name of Husband/Wife: Shri/Smt

Address

3 Names of all living, unmarried dependent Children

i)

ii)

iii)

iv)

4. Father's Name : Shri

Address

5. Religion/Nationality

6. Educational Qualifications.....

7. Business/Occupation.....

8. Operating Centre.....

I, Smt/Shrihereby give consent for my sterilization operation. I am married and my husband/wife is alive. My age isyears and my husband/wife's age is..... years. We have.....male and.....female living children. The age of my youngest living child isyears.

#I am aware that I have the option of deciding against the sterilization procedure at any time without sacrificing my rights to other reproductive health services.

- a) I have decided to undergo the sterilization / re-sterilization operation on my own without any outside pressure, inducement or force. I declare that I / my spouse has not been sterilized previously (may not be applicable in case of re-sterilization).
(.....)
- (b) I am aware that other methods of contraception are available to me. I know that for all practical purposes this operation is permanent and I also know that there are still some chances of failure of the operation for which the operating doctor and health facility will not be held responsible by me or by my relatives or any other person whomsoever
(.....)
- (c) I am aware that I am undergoing an operation, which carries an element of risk.
(.....)
- (d) The eligibility criteria for the operation have been explained to me, and I affirm that I am eligible to undergo the operation according to the criteria.
(.....)
- (e) I agree to undergo the operation under any type of anesthesia, which the doctor/healthfacility thinks suitable for me, and to be given other medicines as considered appropriate by the doctor / health facility concerned.
(.....)
- (f) If, after the sterilization operation, I /my spouse experience (s) a missed menstrual cycle, then I/my spouse shall report within two weeks of the missed menstrual cycle to the doctor/health facility and may avail of the facility to get an MTP done free of cost.
(.....)
- (g) In case of complications following sterilization operation, including failure, and the unlikely event of death following sterilization, I/my spouse and dependent unmarried children will accept the compensation as per the existing provisions of the Government of India Family Planning Insurance Scheme as full and final settlement.
(.....)
- (h) If I/my wife get (s) pregnant after failure of the sterilization operation and If I am not able to get the foetus aborted within two weeks, then I will not be entitled to claim any compensation over and above the compensation offered under the Family Planning Insurance Scheme from any court of law in this regard or any other compensation for upbringing of the child
(.....)
- (i) I agree to come for follow-up visits to the Hospital/Institution/Doctor/health facility as instructed, failing which I shall be responsible for the consequences, if any.
(.....)
- (j) I understand that Vasectomy does not result in immediate sterilization. *I agree to come for semen analysis three months after the operation to conform the success of sterilization surgery (Azoospermia) failing which I shall be responsible for the consequences, if any.(* Applicable for male sterilization cases
(.....)

I have read the above information.

The above information has been read out and explained to me in my own language and that this form has the authority of a legal document.

Date.....

Signature or Thumb Impression of the Acceptor

Name of the Acceptor

Signature of Witness:

.....

Full Name.....

Full Address.....

.....

(Only for those beneficiaries who cannot read and write)

Applicable to cases where the client cannot read and the above information is read out.

Shri/Smt have been fully explained about the contents of the Informed Consent Form in his/her local language.

Signature of Counselor**.....

Full Name:

Full Address:

Date.....

I certify that I have satisfied myself that –

- 1) Shri/Smt.....is within the eligible age-group and is medically fit for the sterilization operation.
- 2) I have explained all clauses to the client and that this form has the authority of a legal document.
- 3) I have filled the Medical record – cum- checklist and followed the standards for sterilization procedures laid down by the Government of India.

.....

.....

Signature of Operating Doctor

Signature of Medical Officer in-charge of the Facility

Date.....

Date.....

(Name and address) Seal

(Name and address) Seal

Denial of Sterilization

I certify that Shri/Smt.....is not a suitable client for reesterilization/sterilization for the following reasons:

1.

2.

He/She has been advised the following alternative methods of contraception.

1.

2.

Signature of the Counselor** or

Doctor making the decision

(Name and full Address).....
.....
.....

(** Counselor can be any health personnel including doctor)

Minilaporotomy Set

ITEM	QUANTITY
Sponge-holding forceps	2
Surgical Drape (towel with central hole)	1
Syringe, 10 cc	2
Needle, 22-G, 1 ½ "	2
Scalpel	1
Scalpel blade, size 15	2
Allis forceps	2
Medium artery forceps Straight	3
Medium artery forceps Curved	3
Needle holder	1
Straight scissors	1
Curved scissors	1
Babcock clamp (medium size)	2
Small Langenbeck (right-angle abdominal)	2
Retractor	1
Dissecting forceps, toothed	1
Dissecting forceps, non-toothed	1
Uterine elevator (for interval procedures)	1
Speculum, Vaginal, Sim's medium	2
Small stainless steel bowl	1
Volsellum	1
Tubal hook, Ramathibodi	1
'O' chromic catgut	1
Small round-bodied, curved needle	1
Small cutting needle	1
Non-absorbable suture material	1
Dressing Material	1
SS kidney tray	1

Annexure - 3

Physical Requirements for Female Sterilization

Sr. No.	Item	Requirements
1	Facilities	<ul style="list-style-type: none"> Well ventilated, fly proof room with concrete/tiled floor which can be cleaned thoroughly. Running water supply through tap or bucket with tap. Electricity supply with a standby generator and other light source.
2	Space Required	<ul style="list-style-type: none"> Area for reception. Waiting area. Counselling area which offers privacy and ensures avoidance of any interruptions. Laboratory with facilities for blood & urine examination. Clinical examination room for initial assessment and follow up. Pre-operative preparation room for trimming of hair, washing, changing of clothes and pre-medication. Hand washing area near the OT for scrubbing. Sterilization room, near the OT, for autoclaving, washing and cleaning equipment, preparation of sterile packs. Operation theatre: should be isolated and away from the general thoroughfare of the clinic, it should be large enough to allow operating staff to move freely and to accommodate all the necessary equipment. Lighting should be adequate. Recovery room: must be spacious and well ventilated, number of beds will be determined by the available space, should be adjacent to the OT. Adequate number of toilets: sufficient number of sanitary type toilets with running water for the clients and the staff. Storage area. Office area for keeping records.
3	Equipment and Supplies	
3A	Examination Room requirements	<ul style="list-style-type: none"> Examination Table. Foot Stool. Blood Pressure apparatus. Thermometer. Stethoscope. Examination Light. Weighing Scale. Instrument for pelvic examination.

Sr. No.	Item	Requirements
3B	Laboratory	<ul style="list-style-type: none"> • Haemoglobinometer and accessories. • Apparatus to estimate albumin and sugar in urine. • Reagents.
3C	Sterilization Room	<ul style="list-style-type: none"> • Autoclave. • Boiler. • Surgical drums. • SS Tray. • Glutaraldehyde solution 2%.
3D	Cleaning Room	<ul style="list-style-type: none"> • Hand Brushes. • Utility gloves. • Basins. • Detergents. • Chlorine solution 0.5%.
3E	Operation Theatre	<ul style="list-style-type: none"> • Operating table capable of Trendelenburg's position. • Step up stool. • Spot light in OT. • Instrument trolley. • Mini Laparatomy kit. • Laparoscopy kit. • Blood Pressure Instrument. • Stethoscope. • Syringe with needles. • Emergency equipment and Drugs. • Room heater. • IV Stand. • Waste basket, storage cabinet, buckets, basins for decontamination. • Box for used linen. • Puncture proof box for needles.
3F	Recovery Room	<ul style="list-style-type: none"> • Patient's cot with mattress, sheet, pillow, pillow cover and blankets. • BP Instrument. • Stethoscope. • Thermometers. • IV Stand. • Emergency equipment and Drugs-as per list.

Sr. No.	Item	Requirements
4	Emergency Equipment and Supplies	<ul style="list-style-type: none"> • Stethoscope. • BP Instruments. • Oral Airways guedel size 3,4,5. • Nasopharyngeal Airways 6,6.5,7.0. • Suction machine with tubing & two straps. • Ambu bag with mask size 3,4,5. • Tubing and oxygen nipple. • Oxygen cylinder with reducing valve and flow meter. • Blanket. • Gauze pieces. • Kidney tray. • Torch. • Syringes and needles, including butterfly sets, IV cannula. • Intravenous infusion sets and fluids. • Sterile laparotomy instruments. • Endotracheal tube 6,6.5,7,7.5,8.0. • Laryngeal mask airway size 3, 4, 5 . • Combitube. • Cricothyroidectomy set.

Sr. No.	Item	Requirements
5	Essential Drugs	<ul style="list-style-type: none"> • Injection Adrenaline. • Injection Atropine. • Injection Diazepam. • Injection Deriphylline. • Injection Physostigmine. • Injection Xylocard. • Injection Hydrocortisone (Dexamethasone). • Injection Pheniramine Maleate. • Injection Promethazine. • Injection Pentazocine. • Injection Ranitidine. • Injection Metoclopramide. • Injection Calcium Gluconate/Calcium Chloride. • Injection Sodium Bicarbonate (7.5%). • Injection Dopamine. • Injection Mephenteramine. • Injection Frusemide. • Injection Methergine. • Injection Oxytocin. • Water soluble jelly. • Electrode jelly. <p>IV Fluids</p> <ul style="list-style-type: none"> • Ringer Lactate. • 0.9 % Sodium chloride (Normal saline). • 5% Dextrose. • Heta Starch (HES 6 %). • Glucose 25 %.

Annexure - 4

Medical Record & Check List for Female Sterilization

Reg. No:.....	OT No.....
Date...../...../..... (DD/MM/YR)	Date of Operation Date...../...../..... (DD/MM/YR)
Name of the State	.....
Name of the District	.....
Name & Type of the Hospital/Facility	..... Camp..... PP Centre..... PHC/CHC..... District Hospital..... Medical college Hospital..... Any Other Specify).....
Name of the Acceptor	.....
Father's Name	.....
Name of Husband/Wife	.....
Address	..........
Contact number (if available)	..... .....

1. Socio-Demographic Information

Age of the client	.....(in completed years)
Age of Spouse	.....(in completed years)
Education	Illiterate..... Primary..... Middle School..... High School..... Higher Secondary..... Graduation & above.....
Religion	Hindu..... Muslim..... Christian..... Any other (specify).....
Caste	SC..... ST..... OBC..... Others.....
Occupation	.....
Marital Status	<i>Married</i> <i>Divorced/Widowed/Separated</i>
Number of Children born	.....(Total) .....(Sons) .....(Daughters)
Currently living	.....(Total) .....(Sons) .....(Daughters)
Age of the Youngest Child	.....

2. A. Menstrual History (For Female Acceptors)

Cycle days	.....
Length	.....
Regularity	Regular..... Irregular.....
Date of LMP	.....

B. Obstetric History (For Female Acceptors)

No: of Spontaneous abortions	.....
No: of Induced abortions	.....
Currently lactating	... Yes..... No.....
Amenorrhoeic	Yes..... No.....
Whether pregnant	Yes..... No..... If yes (no: of weeks of preg).....

C. Contraceptive History

Have you or your spouse ever used any contraception?	Yes..... No.....
Are you or your spouse currently using any contraception during the last 6 months?	None..... IUCD..... Condoms..... Oral Pills..... Any other Specify).....

D. Medical History

Recent medical illness	Yes..... No.....
Previous Surgery	Yes..... No.....
Allergies to medication	Yes..... No.....
Bleeding Disorder	Yes..... No.....
Anemia	Yes..... No.....
Diabetes	Yes..... No.....
Jaundice or liver disorder	Yes..... No.....
RTI/STI/PID	Yes..... No.....
Convulsive disorder	Yes..... No.....
Tuberculosis	Yes..... No.....
Malaria	Yes..... No.....
Asthma	Yes..... No.....
Heart Disease	Yes..... No.....
Hypertension	Yes..... No.....
Mental Illness	Yes..... No.....
Sexual Problems	Yes..... No.....
Prostatitis	Yes..... No.....

D. Medical History

Epididymitis	Yes..... No.....
H/O Blood Transfusion	Yes..... No.....
Gynecological problems	Yes..... No.....
Currently on medication (if yes specify)	Yes..... No.....

Comments.....

Physical Examination

BP.....Pulse.....Temperature.....

Lungs	Normal..... Abnormal.....
Heart	Normal..... Abnormal.....
Abdomen	Normal..... Abnormal.....

3. Local Examination

Female Sterilization

External Genitalia	Normal..... Abnormal.....
PV Examination	Normal..... Abnormal.....
PS Examination	Normal..... Abnormal.....
Uterus Position	Normal..... Abnormal.....
Uterus size	Normal..... Abnormal.....
Uterus Mobility	Normal..... Abnormal.....
Cervical Erosion	Normal..... Abnormal.....
Adnexa	Normal..... Abnormal.....

Comments.....

4. Laboratory Investigations

Hemoglobin level	.....Gms%
Urine: Albumin	Yes.....1 No.....2
Urine- Sugar	Present.....1 Absent.....2
Any Other (specify)	..... ..... .....

Name and Signature of the Examining Doctor

TO BE FILLED BY OPERATING SURGEON

5. Check List Before Conducting Surgery

Client is within eligible age	Yes..... No.....
Client is ever married	Yes..... No.....
Client has at least one child more than one year old	Yes..... No.....
Lab investigations (Hb, urine) undertaken are within normal limits	Yes..... No.....
Medical status as per clinical observation is within normal limits	Yes..... No.....
Mental status as per clinical observation is normal	Yes..... No.....
Local examination done is normal	Yes..... No.....
Informed consent given by the client	Yes..... No.....
Explained to the client that consent form has authority as legal document	Yes..... No.....
Abdominal / pelvic examination has been done in the female and is WNL	Yes..... No.....
Infection prevention practices as per laid down standards	Yes..... No.....

6. Pre Operative Preparation

Fasting	Yes..... No.....
Passed Urine	Yes..... No.....
Any other (specify)	..... ..... .....

7. Anaesthesia/Analgesia

Type of anaesthesia given	Local only..... Local & analgesia..... *General, no intubation..... *General, intubation..... *Any other (specify).....
Time	.....
Drug Name	.....
Dosage	.....
Route	.....

***Signature of Anaesthetist in case of Regional or General Anaesthesia**

8. Surgical Approach

Female Sterilization

Local Anaesthesia	Lignocaine% Other.....
Timing of Procedure	24 hrs. -7 days postpartum..... Interval (42 days or more after delivery or abortion) With abortion, induced or spontaneous Less than 12 weeks... .. More than 12 weeks Any Other (specify).....
Technique	Minilap... .. With C section..... With other Surgery..... Laproscopy SPL / DPL
Method of Occlusion of Fallopian Tubes	Modified Pomerory Laproscopy: Ring..... Clip.....
Details of Gas Insufflation Pneumoperitonium created (CO2/ Air)	Yes..... No.....
Insufflator used	Yes..... No.....
Specify details of Complications and Management	...............

Name and Signature of the Operating Surgeon

Date.....

9. Vital Signs: Monitoring Chart (For Female Sterilization)

Event	Time	Sedation*	Pulse	BP	Resp. Rate	Bleeding	Comments (Treatment)
Pre-operative (every 15 min. after pre medication)							
Intra-operative (continuous)							
Post Operative 1. Every 15 min for first hour & longer if the patient is not stable/awake 2. Every 1 hour till 4 hrs. of surgery	15 (min)						
	30 (min)						
	45 (min)						
	1 (hr)						
	2(hrs)						
	3 (hrs)						
	4(hrs)						

*Sedation : 0-Alert 1-Drowsy 2-Sleeping/arousable 3-Not arousable

Name and Signature of Attending Staff Nurse

10. Post Operative Information

Passed Urine	Yes..... No.....
Abdominal Distension	Yes..... No.....
Patient feeling well	Yes..... No.....
If no, please specify	...............

11. Instructions on Discharge

Male Sterilization client observed for half an hour after surgery	Yes..... No.....
Female Sterilization client observed for four hours after surgery	Yes..... No.....
Post operative instructions given verbally	Yes..... No.....
Written post operative instructions given	Yes..... No.....
Patient counseled for post operative instructions	Yes..... No.....
Comments	...............

Name and Signature of Discharging Doctor

Annexure - 5

Post Operative Instruction Card

Name & Type of the Hospital/Facility	.....
Name of the Acceptor	.....
Father's Name	.....
Husband's Name	.....
Address	...............
Contact Number (if available)	.....
Date of Operation	...../...../.....(DMY)
TYPE OF OPERATION	MINILAP / POST PARTUM / LAPROSCOPIC (SP / DP)

Post Operative Instructions

1. Please come for follow up-
After 48 hours for check up
 - On 7th day for stitch removal
 - After one month or after first menstrual period whichever is earlier.
 - In emergency as and when required
2. Medication as prescribed:
3. Return home and rest for the remaining day.

4. Resume only light work after 48 hours and gradually return to full activity by two weeks following surgery.
5. Resume a normal diet as soon as possible.
6. Keep the incision area clean and dry. Do not disturb or open the dressing.
7. Bathe after 24 hours following the surgery. If the dressing becomes wet, it should be changed so that the incision area is kept dry until the stitches are removed.
8. In the case of interval sterilization the client may have intercourse one week after surgery, or whenever she feels comfortable.
7. Report to the doctor or clinic if there is excessive pain, fainting, fever, bleeding or pus discharge from the incision, not passed urine, not passed flatus and feels bloating of abdomen.
10. Contact health personnel or doctor in case of any doubt.
11. Return to the clinic, if there is any missed period/suspected pregnancy.

Follow-Up Report

Follow-up	Time after surgery	Date of follow up	Complications if any	Action taken
1st	48 hrs			
2nd	7th day			
3rd	1 month after surgery or after the first menstrual period, whichever is earlier			
Emergency				

Comment.....

Name, Designation and Signature of the person filling up the report

Processing Surgical Gloves

The risk in reusing surgical gloves is that processed gloves contain more invisible tears than new ones and therefore provide less protection to the wearer. Sterilisation (autoclaving) and HLD (steaming or boiling) of gloves, when correctly performed, can provide a high quality product. In addition, double-gloving for high-risk procedures can be done. Therefore, processing surgical gloves constitutes an appropriate reuse of disposable items.

How to Decontaminate and Clean Surgical Gloves Before Sterilisation Or High-Level Disinfection (Hld)

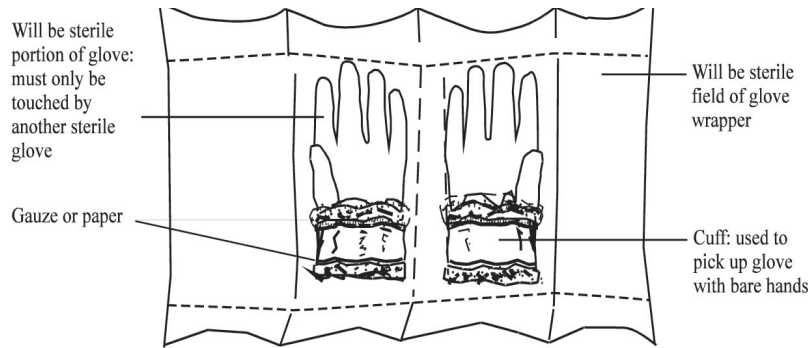
- STEP 1:** Before removing soiled gloves, immerse hands briefly in a container filled with 0.5% chlorine solution (or other locally available disinfectant).
- STEP 2:** Remove gloves by turning inside out and soak in the chlorine solution for 10 minutes. (Performing Steps 1 and 2 insures that both surfaces of the gloves are decontaminated.)
- STEP 3:** Wash gloves in soapy water, cleaning inside and out.
- STEP 4:** Rinse gloves in clean water until no soap or detergent remains. (Residual soap or detergent can interfere with subsequent sterilisation or HLD).
- STEP 5:** Test gloves for holes by inflating them by hand and holding them under water. (Air bubbles will appear if there are holes).
- STEP 6:** Gently dry gloves inside and out before proceeding with sterilisation or HLD. (Gloves which remain wet for long periods of time will absorb water and become tacky.)

Note: Gloves should be discarded after processing three times because invisible tears may occur with additional processing (Bagg, Jenkins and Barker 1990; Martin et al 1988).

How to Sterilise Surgical Gloves

After decontamination, cleaning and drying, gloves must be packaged prior to sterilising by autoclaving. First, fold the cuffs of the gloves out towards the palm so that they can be put on easily and without contamination after sterilisation. Next, put gauze or paper inside each glove and under the fold of the cuff and wrap the gloves as shown in Figure F-1. (Do not tie tightly or wrap glove packs with rubber bands.) Finally, place them in a wire basket on their sides to allow optimum steam penetration. (If gloves are stacked in piles, penetration of steam under the cuffs may be poor.) Autoclave at 121oC (250oF) for 30 minutes and at a pressure of 106 kPa (15 lb/in2).

Figure F-1. Preparing Gloves for Autoclaving (steam sterilisation)



Source: South East Asia Office/ World Health Organization 1988.

Remember: Higher temperatures and pressures are destructive to gloves.

Immediately after autoclaving, gloves are extremely fragile and tear easily. Gloves should not be used for 24 to 48 hours to allow the elasticity to be restored and to prevent tackiness (stickiness).

Tips to Help Avoid Glove Problems

PROBLEM: TACKY OR STICKY GLOVES	
Probable Cause	Recommended Solution
Residual liquid soap or detergent	Reduce amount of liquid soap or detergent used when washing gloves. Rinse gloves at least three times in clean water.
Heated to high temperature for too long	Use 30 minutes sterilising time at 121oC (250oF) and remove gloves from steriliser as soon as cycle is completed.
Gloves sterilised with other goods	Sterilise gloves separately.
Gloves not allowed to dry completely after steaming	Wear 'wet' within 30 minutes or allow to dry for 4 to 6 hours before using.
Poor powdering	Use absorbable glove powder and follow manufacturer's instructions to insure a film of powder on all surfaces.
Surfaces of gloves touching each other	Gauze or paper wicks should be inserted between the palm and back of hand of each glove and between the hand of the glove and the turned-back cuff. This allows steam to contact all surfaces during sterilisation and prevents surfaces from adhering to each other.
Breakdown (deterioration) of rubber (latex)	Store in a dry, cool area.
(Rubber gloves deteriorate while stored even though they have not been used. They become soft, sticky and unusable.)	Do not store in direct sunlight.
PROBLEM: EXCESSIVE TEARING OR RUPTURING	
Gloves used too soon following sterilisation	Do not use gloves for 24 to 48 hours after sterilisation. This allows gloves to regain their elasticity before use.

How to High-Level Disinfect Surgical Gloves by Boiling

Although boiling effectively high-level disinfects gloves, it is difficult to dry them without contaminating them. Therefore, boiling surgical gloves should be done only if the gloves are to be used immediately (i.e., worn 'wet' after they have been allowed to cool).

After surgical gloves have been decontaminated and thoroughly washed they are ready for HLD.

STEP 1: Place gloves in a bag made of plastic or nylon netting.

STEP 2: Place a weight in the bag so that all gloves and the bag will be at least 2.5 cm (1 inch) below the surface of the water.

STEP 3: Close lid over pan and bring water to a full, rolling boil. (When water only simmers, very little steam is formed and the temperature at the water's surface may never get high enough to kill micro-organisms.)

Remember: Be sure there is sufficient water in the pan to cover items for the entire 20 minutes of boiling.

STEP 4: Reduce heat so that water continues to boil at a rolling boil. (When water boils too violently, it evaporates quickly and wastes fuel.)

STEP 5: When rolling boil begins, start timer or note time on clock and record in HLD log. (No objects or water should be added after timing starts.)

STEP 6: Boil gloves for 20 minutes.

STEP 7: After boiling for 20 minutes, remove bag of gloves with high-level disinfected, dry forceps. (Never leave boiled objects in water which has stopped boiling. As the water cools and steam condenses, air and dust particles are drawn down into the container and may contaminate the gloves [Perkins 1983].)

STEP 8: Allow excess water to drip off gloves (shake the bag gently). Place the bag in a high-level disinfected container, cover and allow to cool (about 5 to 10 minutes) before using.

STEP 9: Wear high-level disinfected gloves to untie the bag. Remove gloves from the container using a high-level disinfected forceps. Gloves which are worn 'wet' may be weakened and less stretchy (elastic). Therefore, put on 'wet' gloves very carefully.

STEP 10: Gloves remaining in the bag at the end of the clinic session should be reprocessed. (They will not dry completely inside and outside.)

Note: After boiling, gloves should be used within 30 minutes, if possible. After this time, the fingers of the gloves stick together and the gloves are hard to put on despite being damp.

Decontaminating and Cleaning Instruments, Hypodermic Needles, Syringes and Linens

How to Decontaminate and Clean Surgical (Metal) Instruments

Decontamination

STEP 1: After use, immerse all soiled instruments in a plastic container filled with 0.5% chlorine solution or other locally available disinfectant for at least 10 minutes. (This step is necessary to help prevent transmission of HBV or HIV/AIDS to clinic staff.)

STEP 2: If the instruments and other items cannot be washed immediately, rinse the objects with water and towel dry to minimize possible corrosion (rusting) due to chlorine.

Cleaning

Remember: Wear utility gloves, eyewear and mask. Do not use hot water because it coagulates protein, making blood and body fluids hard to remove.

STEP 3: Scrub instruments under water to prevent splashing of infectious materials. Use a soft brush and liquid soap or detergent and water (be sure to clean the teeth, joints and screws, an old toothbrush works well).

STEP 4: Rinse again with clean water until no soap or detergent remains. (Soap or detergent can interfere with the action of some chemical disinfectants).

STEP 5: Dry by air or with a clean towel. (Water from wet instruments will dilute chemicals used for HLD, making them ineffective.) Drying is not necessary for instruments which are to be boiled.

STEP 6: Proceed with sterilisation (if available) or HLD by steaming, boiling or soaking in a chemical disinfectant.

How to Decontaminate, Clean and Dispose of Needles and Syringes

The use, and especially the disposal of both needles and syringes, however, creates logistical and infection prevention problems. For example, a clinic or health care facility using disposable needles and syringes must ensure that adequate supplies are available at all times. Without a continuous supply of needles and syringes, services for surgical contraceptive methods, as well as other activities, will be disrupted.

An even larger problem is how to safely dispose of used needles and syringes if they cannot be burned or buried. In many countries, boxes of used disposable needles can be found lying discarded outside

health care facilities and hospitals. These used needles and syringes constitute an increasing health risk, especially to children and adults seeking items to play with, sell or use.

Instructions

When available and affordable, disposable (plastic) sterile syringes and needles are recommended for all client care and surgical procedures. If disposable are being used, it is important to:

- Maintain adequate supplies.
- Discard needles and syringes in a puncture-proof container immediately after use.
- Dispose of these containers after they are three-quarters full by burning or burying them.

Reusable Syringes and Needles

STEP 1: Do not recap needle or disassemble needle or syringe.

STEP 2: Immediately after use, draw a small amount of 0.5% chlorine solution into the syringe through the needle.

STEP 3: Decontaminate assembled needle and syringe by placing in a 0.5% chlorine solution for 10 minutes.

STEP 4: Wearing utility gloves, remove from decontamination solution and push out (flush) solution from assembled needle and syringe.

STEP 5: Take needle and syringe apart and clean with soapy water. (Be sure to clean hub area of the needle.) Insert stylet or needle wire through hub of needle to be sure it is not blocked.

STEP 6: Put syringe and needle back together. Rinse at least three times by filling with clean water and pushing out (flushing) water into another container so as not to contaminate the rinse water.

STEP 7: Detach needle from syringe.

STEP 8: Examine needle and syringe for:

- bent needle tip or other damage,
- needle hub fit to syringe, and
- readable syringe markers (lines indicating volume, cc or ml).

STEP 9: Dispose of damaged needles in a puncture-proof container. When container is three quarters full, seal and either burn or bury.

STEP 10: Sterilise or high-level disinfect by boiling for 20 minutes.

Recapping Needles

If needles must be recapped, use the 'one-handed' recap method:

- First, place cap on a hard, flat surface, then remove hand.
- Next, with one hand, hold syringe and use needle to 'scoop up' cap.

- Finally, when cap covers needle completely, hold cap at base with other hand and secure cap on needle hub.

How to Clean Linen and Surgical Drapes

All linen items used in the direct care of a client must be thoroughly washed in water with liquid soap or detergent before reuse. Decontamination prior to washing is not necessary.

STEP 1: At the end of the surgical procedure, and while still wearing gloves, lift and remove the surgical drape and carefully place in a container or plastic bag.

STEP 2: Wash the entire item in water with liquid soap or detergent to remove all contamination, even if invisible.

Remember: Never just wash blood soaked or wet areas of linen.

STEP 3: Rinse with clean water.

STEP 4: Completely air or machine dry before further processing. (Air dry in direct sunlight, if possible, keeping the fabric off the ground, away from dust and moisture).

STEP 5: After linens are totally dry, they should be checked for holes and very threadbare areas. If these are present, the item must be discarded or repaired before reuse. (If there are any holes or many repaired areas, the item should not be used as a drape. It can be cut into pieces to be used as cleaning rags).

Note: If surgical drapes or surgical gowns are to be sterilised, do not iron. (Ironing dries out the material making autoclaving more difficult).

If a **clean drape** is acceptable, the air-dried drape can be ironed before placing it on a shelf or in a container for storage. A clean drape should be used for procedures when sterile drape is not necessary (e.g., Norplant implants insertion and removal).

Clean gowns and drapes should be stored in a clean, dry space which is mold-, dust- and insect-free, preferably in a closed cabinet and not near areas that are frequently mopped or near sinks. (Air should circulate between the items in the storage area and the supply should be rotated).

Annexure - 8

Management of Emergencies

- Think A, B, C, D. - A: Assess/airways, B: breathing, C: circulation, D: drugs
- Get help from other staff, immediately call doctor, stay with patient
- Always keep Emergency kit, drugs and equipment available

Observation - What you see	Reason - What is the cause	Action - What to do
(1) Fainting -Loss of consciousness -Vital signs present -Lungs clear and responsive	Vaso - vagal reaction Caused by severe pain or fear Rule out other reasons for loss of consciousness such as cardiac arrest or blood loss.	<ol style="list-style-type: none"> 1. Assess: Airway- - Lie client down 2. Breathing- -Assess lungs 3. Circulation- -Take vital signs -Asses for blood loss and treat* 4. Drugs: -If fainting continues give Atropine 0.4 mg. IM.
(2) Unconscious with twitching and involuntary movements	Seizures caused by -Seizure disorder -Drug induces	<ol style="list-style-type: none"> 1. Assess: Airway- - Maintain airways. Lie on side and /or turn head to side – clear mouth of vomitus -Do not restrain but clear areas to prevent any injury 2. Breathing- -Give oxygen by mask , keep ready an Ambu bag 3. Circulation- -Start IV and if seizure continues for more then few minutes 4. Drugs: -If last for more then 4 minutes, give Diazepam 5 mgs IV slowly. May repeat every 5 minutes to total of 20 mgs

Observation - What you see	Reason - What is the cause	Action - What to do
<p>(6) -Pale, clammy</p> <ul style="list-style-type: none"> -Cyanosis -Anxiety -Restlessness -Unconsciousness (late sign) 	<p>Shock - due to:</p> <ul style="list-style-type: none"> -Blood loss -Cardiac or respiratory difficulty 	<ol style="list-style-type: none"> 1. Assess: Airway- <ul style="list-style-type: none"> - Lie client down, raise legs, 6-12 inches -Reassure 2. Breathing- <ul style="list-style-type: none"> -Give oxygen by mask, ready Ambu Bag 3. Circulation- <ul style="list-style-type: none"> -Start IV and give 1-2 liters RL or NS IV fluids quickly (each liter in 15 minutes) -Monitor vital signs -Asses for blood loss and treat*
<p>(4) Very slow Respiration (<8 per minute)</p> <ul style="list-style-type: none"> -Drowsy -Lethargic -Cyanotic (bluish discoloration of lips and nail beds) -Less responsive to stimuli 	<p>-Over sedation from opiates such as pethidine / pentozocine or other drugs e.g. diazepam</p> <p>Or</p> <ul style="list-style-type: none"> -Anaphylaxis / severe asthma -Severe blood loss 	<ol style="list-style-type: none"> 1. Assess: Airway- <ul style="list-style-type: none"> -Talk with client, stimulate 2. Breathing- <ul style="list-style-type: none"> -Give oxygen by mask-ready Ambu bag, Assess lungs, if wheezing and stridor, follow anaphylactic guidelines 3. Circulation- <ul style="list-style-type: none"> -Assess for blood loss and manage* -Take vital signs -Start IV 4. Drugs: <ul style="list-style-type: none"> In case of respiratory depression due to opiates give Naloxone 0.4mgs. SC / IM/ IV and may repeat every 2 minutes to maximum of 10 mgs.
<p>(4) Fast Respirations: (>25 per minute)</p> <p>Early stage</p> <ul style="list-style-type: none"> -Anxiety, Fear -Lungs clear 	<p>Hyperventilation due to fear/ anxiety</p>	<p>Assess: Airway-</p> <ul style="list-style-type: none"> -Reassure, talk with patient, comfort breathing -Assess lungs – clear airway if there is any obstruction -See anaphylaxis below -Observe vital signs

Observation - What you see	Reason - What is the cause	Action - What to do
<p>Advanced stage</p> <ul style="list-style-type: none"> -Hives, rash -Skin itching -Anxiety -Fast shallow respiration -Wheezing -Strider -Weakness -Cyanosis 	<p>Allergy – early signs of rash and hives</p> <p>Or</p> <p>Anaphylaxis or severe bronchospasm, including symptoms of respiratory distress</p>	<ol style="list-style-type: none"> 1. Assess Airway 2. Breathing- <ul style="list-style-type: none"> -Give oxygen by mask - ready Ambu bag -Assess lungs - wheezing, constriction and strider, shallow fast respiration 3. Circulation- <ul style="list-style-type: none"> -Start IV fluids , observe vital signs 4. Drugs: <ol style="list-style-type: none"> 1. If early signs give Pheneramine - 25 mgs and observe. If symptoms worsen go to #2. 2. Give Adrenaline 1:1000, 0.5 ml SC/IM. May repeat adrenaline every 10 minutes for a maximum of 3 doses. Give Pheneramine 25 mgs IM/IV and observe. If symptoms worsen 3. Give Dexamathasone 0.8mgs IM/IV or hydrocortisone 200 mgs IM/IV
<p>(6) No respirations and No heart beat</p> <ul style="list-style-type: none"> -No pulse or very weak pulse -No breathing -Unable to obtain BP -Cyanotic -Unresponsive 	<p>Cardiac or respiratory arrest</p>	<ol style="list-style-type: none"> 1. Assess: Airway- <ul style="list-style-type: none"> - Position head: head tilt-chin thrust -Insert oral ways 2. Breathing- <ul style="list-style-type: none"> -Resuscitate with Ambu bag -If connector available, attach Ambu bag to oxygen. 3. Circulation- <ul style="list-style-type: none"> -Take carotid pulse -If no pulse, start chest compressions -Start IV and run in 1-2 liters RL or NS quickly 4. Drugs: <ul style="list-style-type: none"> -Atropine 1 mg. IV. May repeat upto 3 mgs total -Adrenaline 1:1000 – 0.5 ml. diluted in 10-20 ml of IV fluid. Repeat adrenaline after 5 minutes.

*** Stop bleeding with pressure and/or prepare to assist physician with surgical intervention to stop bleeding i.e. laparotomy. Give 1-2 liters of Normal Saline or RingerLactate IV solution quickly (1 liter over 15-20 minutes)in order to increase blood volume and prevent hemorrhagic shock.**

Drugs and Supplies

Every clinic / facility should be equipped with basic drugs and supplies and certain drugs and supplies for dealing with an emergency. Because emergency drugs are not used routinely it is easy to be overlooked or out of stock or out of date (expired date).

An emergency kit should be developed for all sites. This kit should contain all the essential drugs and supplies so that it can be quickly taken to the site where emergency has occurred (Pre procedure Room, post procedure room, resting room etc) Oxygen cylinders should be on stand with wheel or easily movable. Every one at the facility should know the location of the emergency kit and other equipment and these should never be kept locked.

Emergency drugs and equipments should be checked daily. The senior member of staff should take the responsibility for the task. S/he should ensure that:

- The required drugs and supplies as per standard list are present.
- The drugs are not expired.
- Sterile items are periodically reprocessed and returned to the kit.
- Equipments are kept clean and in good working order.
- Used or broken items are replaced and
- Battery operated items are working.

Check the following are available / working:

- Oxygen is available and working
- Standby oxygen cylinder available
- Make sure that the oxygen cylinder key is with cylinder.
- Ensure that the suction machine and Ambu bag is available and working
- Ensure that emergency/anaphylaxis medicine tray is available.

Overview of the revised Compensation Scheme

A. High Focus States

Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand, Chattisgarh, Uttrakhand, Orissa, Jammu & Kashmir, Himachal Pradesh, Assam, Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland, Tripura, Sikkim.

1. Public Facilities

Procedure	Acceptor	Motivator	Drugs & Dressings	Surgeons' Charges	Anesthetist Charges	Staff Nurse	OT Technician	Refreshments	Camp Management	Total (in Rs.)
Vasectomy (ALL)	1100	200	50	100		15	15	10	10	1500
Tubectomy (All)	600	150	100	75	25	15	15	10	10	1000

2. Accredited Private/NGO Facilities

Procedure	Facility	Motivator	Total (in Rs.)
Vasectomy (ALL)	1300	200	1500
Tubectomy (All)	1350	150	1500

B. Non-High Focus State

Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Maharashtra, Goa, Gujarat, Punjab, Haryana, West Bengal, Delhi, Chandigarh, Puducherry, Andaman and Nicobar Islands, Lakshadweep and Minicoy Islands, Dadra and Nagar Haveli, Daman and Diu.

1. Public Facilities

Procedure	Acceptor	Motivator	Drugs & Dressings	Surgeons' Charges	Anesthetist Charges	Staff Nurse	OT Technician	Refreshments	Camp Management	Total (in Rs.)
Vasectomy (ALL)	1100	200	50	100	-	15	15	10	10	1500
Tubectomy (BPL/SC/ST only)	600	150	100	75	25	15	15	10	10	1000
Tubectomy (APL only)	250	150	100	75	25	15	15	10	10	650

Family Planning Insurance Scheme

Limit of Indemnity

Claims Arising out of Sterilization Operation		Amount
A	Death at hospital/within seven days of discharge	Rs. 2,00,000/-
B	Death due to sterilization (8th –30th day from the date of discharge)	Rs. 50,000/-
C	Expenses for treatment of Medical Complications	Rs. 25,000/-
D	Failure of Sterilization	Rs. 30,000/-
D	Doctors/Facilities covered for litigations up to 4 cases per year including defence cost	Rs. 2,00,000/-

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