



MEDICAL TERMINATION OF PREGNANCY

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MTP ACT



1972

MTP Act Specifies:

- 1 → The **INDICATIONS** for legal Terminations
- 2 → **WHO** can Terminate
- 3 → The **PLACE** where it can be terminated
- 4 → Last but most imp. **CONSENT** requirement

When Pregnancy can be terminated.. ???

- 1--continuation of pregnancy is a **risk to the life** of pregnant woman
or it can cause grave injury to her physical and mental health
- 2--Substantial **risk that the child** , if born ,would be seriously handicapped due to physical or mental abnormalities
- 3--pregnancy caused by **rape**
- 4--**failure** of **contraceptive** in married woman



Experience of RMP-

Up to 12 weeks Gestation only

- PG Degree or Diploma in OB & Gynae
- Who is registered in state medical register
---6months of house surgeon ship in gynae
- Or experience of working in dept of gynae -1yr

1-- A Practitioner who has assisted RMP in 25 cases of Medical termination of pregnancies ,at least 5 of which have been performed independently in a hospital established or maintained by govt or a training institute approved for this

Experience and Training Required by a RMP-upto 20 wks

- **PG Degree or Diploma in OB & Gynae**
- **Completed 6 months as House Surgeon in OB & Gynae**
- **At least one yr experience in dept of ob & Gynae at any hospital that has all facilities**

Where pregnancy can be Terminated -- PLACE

- Hospitals established or **maintained by the Govt**
- **A Place approved by the Government** or **DLC** constituted by the Govt

Consent ----- Form C

1-- Only the consent of a women is required

2-- **If Age <18 yrs** or a mentally ill patient consent of guardian is reqd



First Trimester (Up to 12 Weeks)	Second Trimester (13–20 Weeks)
<u>Medical</u>	<div>Clip slide</div> <ul style="list-style-type: none"> • Prostaglandins PGE1 (Misoprostol), 15 methyl PGF2a (Carboprost), PGE2 (Dinprostone) and their analogues (used-intravaginally, intramuscularly or intraamniotically) • [REDACTED]
• Mifepristone	
• Mifepristone and Misoprostol (PGE1)	
• Methotrexate and Misoprostol	• Intrauterine instillation of hyperosmotic solutions
• Tamoxifen and Misoprostol	<ul style="list-style-type: none"> a. Intra-amniotic hypertonic urea (40%), saline (20%) b. Extra-amniotic—Ethacrydine lactate, Prostaglandins (PGE2, PGF2a)
<u>Surgical</u>	
• Menstrual regulation	• Oxytocin infusion high dose used along with either of the above two methods
• Vacuum Aspiration (MVA/EVA)	• Hysterotomy (abdominal)— less commonly done
• Suction evacuation and/or curettage	
• Dilatation and evacuation:	
i. Rapid method	
ii. Slow method	

MEDICAL METHODS OF ABORTION

CONTRAINDICATIONS:

HB<8g%

Suspected/confirmed ectopic
or undiagnosed adnexal mass

Uncontrolled hypertension
>160/110mmHg

Heart disease: Angina, valvular ht
ds, arrhythmias which can lead to sudden
cardiac arrest.

Hypersensitivity to Mifepristone, Misoprostol

Renal, liver & respiratory disease (except asthma), Inherited
porphyrias, Chr adrenal insufficiency, uncontrolled seizures, on
long term corticosteroid use,

FIRST TRIMESTER TERMINATION OF PREGNANCY

MEDICAL METHODS OF FIRST TRIMESTER ABORTION:

► Mifepristone (RU-486) and Misoprostol –

- ❑ Mifepristone an analog of progestin (norethindrone) acts as an antagonist, blocking the effect of natural progesterone.
- ❑ Addition of low dose prostaglandins (PGE1) improves the efficiency of first trimester abortion. It is effective upto 63 days and is highly successful when used within 49 days of gestation.

REF:

http://www.nrhmtn.gov.in/modules/MMA_Handbook.pdf

VISIT	DRUGS
DAY 1	200 mg Mifepristone oral; <ul style="list-style-type: none">• Anti D 50 mcg, if Rh negative (give 300 mcg if 50mcg not available)
DAY 3	400 mcg Misoprostol (two tablets of 200 mcg each) sublingual/ buccal/ vaginal <ul style="list-style-type: none">• Analgesics (Ibuprofen) ;• Antiemetic;• Offer contraception
DAY 15	Confirm and ensure completion of abortion; <ul style="list-style-type: none">• Offer contraception, if not already done so

NOT COMMONLY USED. NO NEED TO KNOW
DOSAGE


► Methotrexate and Misoprostol –

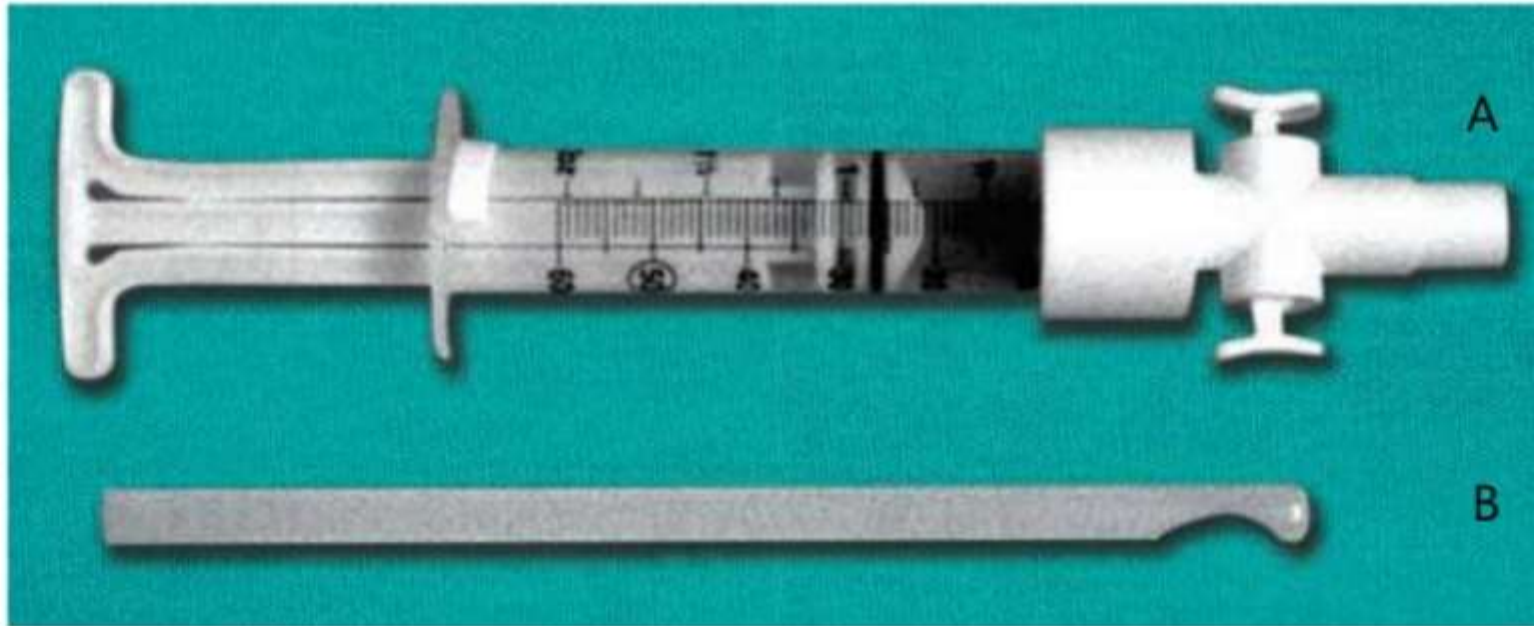
- ❑ Methotrexate 50 mg/m² IM (before 56 days of gestation) followed by 7 days later misoprostol 800 µg vaginally is highly effective.
- ❑ Misoprostol may have to be repeated after 24 hours if it fails.
- ❑ If the procedure fails, ultrasound examination is done to confirm the failure.
- ❑ Then suction evacuation should be done.
- ❑ **Methotrexate and misoprostol regimen is less expensive but takes longer time than Mifepristone and Misoprostol.**
- ❑ Misoprostol has less side effects and is stable at room temperature unlike other PGs, which must be refrigerated.

SURGICAL METHODS OF FIRST TRIMESTER ABORTION:

► MENSTRUAL REGULATION:

- ❑ It is the aspiration of the endometrial cavity within 14 days of missed period in a woman with previous normal cycle.
- ❑ The operation is done as an out patient or an office procedure
- ❑ It is done with aseptic precautions and in apprehensive patients, sedation or paracervical block anesthesia may be employed.
- ❑ After introducing the posterior vaginal speculum, the cervix is steadied with an Allis forceps.

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- ❑ Cervix may be gently dilated using 4 or 5 mm size dilators.
 - ❑ 5–6 mm suction cannula (Karman's) is then inserted and attached to the 50 mL syringe for suction.
 - ❑ The cannula is rotated, pushed in and out with gentle strokes.
 - ❑ The operator should examine the aspirated tissue by floating it in a clear plastic dish over a light source.
 - ❑ Placental tissue appears fluffy and feathery when floats in normal saline.
 - ❑ This will help to detect failed abortion, molar pregnancy or ectopic pregnancy.
 - ❑ The procedure is contraindicated in advanced pregnancy and in the presence of local pelvic inflammation.



Menstrual regulation equipment —

(A) Syringe

(B) Plastic cannula with whistle tip used in suction evacuation

➤ VACUUM ASPIRATION (MVA/EVA):

- ❑ Done upto 12 weeks with minimal cervical dilatation
- ❑ It is performed as an outpatient procedure using a plastic disposable Karman's cannula (up to 12 mm size) and a 60 mL plastic (double valve) syringe.
- ❑ It is quicker (15 minutes), effective (98–100%), less traumatic and safer than dilatation, evacuation and curettage.
- ❑ The procedure may be manual vacuum aspiration (MVA) or electric vacuum aspiration (EVA).
- ❑ Hand operated double valve plastic syringe is attached to a cannula.
- ❑ The cannula is inserted transcervically into the uterus and the vacuum is activated.
- ❑ A negative pressure of 660 mm Hg is created.
- ❑ Aspiration of the products of conception is done


► SUCTION EVACUATION AND/OR CURETTAGE:

- ❑ It is a procedure in which the products of conception are sucked out from the uterus with the help of a cannula fitted to a suction apparatus.
- ❑ Preliminaries:
 1. General anaesthesia is usually not needed.
 2. If the patient is apprehensive, intravenous diazepam 5–10 mg (conscious sedation) supplemented by paracervical block is quite effective.
 3. The patient is put on the table after she empties her bladder.



□ Steps:

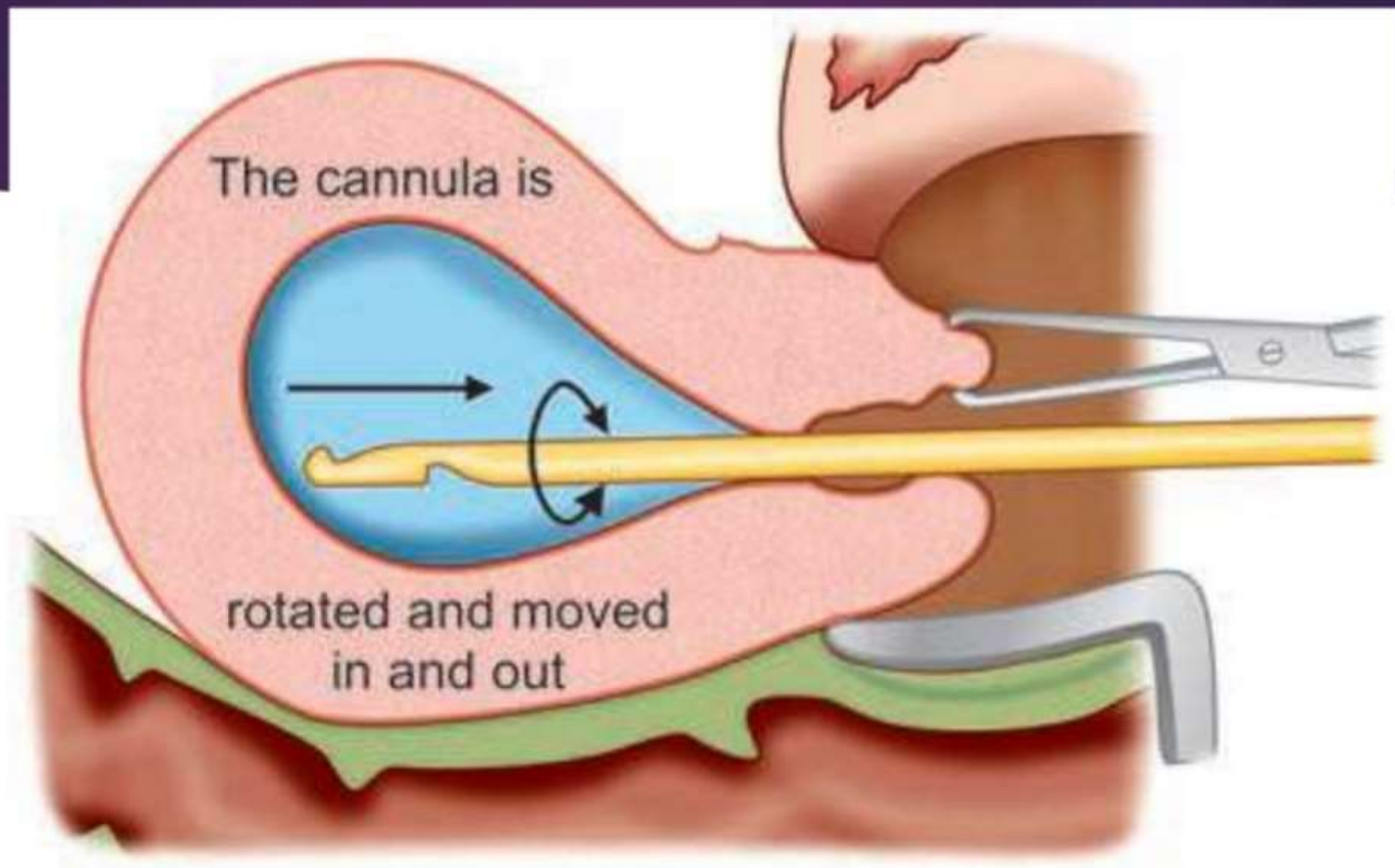
1. Vaginal examination is done to note the size and position of the uterus and to note the state of cervix. *USG (TAS/TVS) should be performed when there is any doubt about the gestational age.*
2. Posterior vaginal speculum is introduced and an assistant is asked to hold it.
3. The anterior lip of the cervix is to be grasped by an Allis forceps. An uterine sound is to be introduced to note the length of the uterine cavity and position of the uterus.

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4. The cervix may have to be dilated with smaller size graduated metal dilators up to one size less than that of the suction cannula. Feeling of "snap" of the endocervix around the dilator is characteristic. Instead laminaria tent 12 hours before (osmotic dilator) or misoprostol (PGE1) 400 µg given vaginally 3 hours prior to surgery produces effective dilatation.
 5. Intravenous methergin 0.2 mg is administered.
 6. The appropriate suction cannula is fitted to the suction apparatus by a thick rubber or plastic tubing. The cannula is then introduced into the uterus, the tip is to be placed in the middle of the uterine cavity.
 7. **The pressure of the suction is raised to 400–600 mm Hg.** The cannula is moved up and down and rotated within the uterine cavity (360°) with the pressure on. The suction bottle is inspected for the products of conception and blood loss. The suction is regulated by a finger placed over a hole at the base of the cannula.

The end point of suction is denoted by:


- (a) No more material is being sucked out
- (b) Gripping of the cannula by the contracting smaller size uterus
- (c) Grating sensation
- (d) Appearance of bubbles in the cannula or in the transparent tubing.

8. **The vacuum should be broken before withdrawing the cannula** down through the cervical canal to prevent injury to the internal os.
9. It is better to curette the uterine cavity by a small flushing curette at the end of suction and the cannula is reintroduced to suck out any remnants.
10. After being satisfied that the uterus is remaining firm, and there is minimal vaginal bleeding, the patient is brought down from the table after placing a sterile vulval pad.



➤ Complications

1. **Excessive haemorrhage** : may be due to -
 - a. incomplete evacuation or
 - b. atonic uterus
2. **Injury** :
 - a. Cervical lacerations of varying degree which may lead to formation of a broad ligament hematoma
 - b. Uterine perforation.
3. **Shock due to** :
 - a. Local anaesthesia—Convulsions, cardiorespiratory arrest, death due to intravascular injection or over dose.
 - b. Excessive blood loss.
 - c. Cervical shock—Vasovagal syncope due to cervical stimulation.

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- 4. **Perforation**—Injury to major blood vessels, bowel or bladder. Risk is more with advanced gestation.
 - 5. **Sepsis**—Endometritis, myometritis and pelvic peritonitis.
 - 6. **Hematometra** may cause pain.
 - 7. **Increased morbidity.**
 - 8. Continuation of pregnancy (failure) – 1%.

SECOND TRIMESTER TERMINATION OF PREGNANCY

MEDICAL METHODS:

► PROSTAGLANDINS:

- ❑ They act on the cervix and the uterus.
- ❑ The PGE (dinoprostone, sulprostone, gemeprost, misoprostol) and PGF (carboprost) analogues are commonly used
- ❑ PGEs are preferred as they have more selective action on the myometrium and less side effects.

2. Gemeprost (PGE1 analogue):

- 1 mg vaginal pessary every 3–6 hours for five doses in 24 hours has got about 90% success.
- The mean induction-abortion interval was 14–18 hours.

3. Mifepristone and prostaglandins:



The standard method in today's practice

- Mifepristone 200 mg oral, followed 36–48 hours later by misoprostol
- 800 µg vaginal; then misoprostol 400 µg oral every 3 hours for 4 doses is used.
- Success rate of abortion is 97% and median induction delivery interval is 6.5 hours.
- Pretreatment with mifepristone reduces the induction—abortion interval significantly compared to use of misoprostol alone.

4. Dinoprostone (PGE₂ analogue):

- 20 mg is used as a vaginal suppository every 3–4 hours (maximum for 4–6 doses).
- When used along with osmotic dilators, the mean induction to abortion interval is 17 hours.
- PGE₂ is thermolabile (needs refrigeration) and is expensive.

5. Prostaglandin F₂ (PGF₂ α), carboprost tromethamine—

- 250 μ g IM every 3 hours for a maximum 10 doses can be used.
- The success rate is about 90% in 36 hours.
- Side effects of PGF₂ α (nausea, vomiting, diarrhoea and pain at injection site) are more.
- It is contraindicated in cases with bronchial asthma.

No more practiced

❑ Between 16 and 20 weeks:

▶ INTRAUTERINE INSTILLATION OF HYPERTONIC SOLUTION

- Intra-amniotic
- Extra-amniotic

► Intra-amniotic:

❑ Intra-amniotic instillation of hypertonic saline (20%) is less commonly used now. It is instilled through the abdominal route.

❖ Mode of action: There is liberation of prostaglandins following necrosis of the amniotic epithelium and the decidua. This in turn excites uterine contraction and results in the expulsion of the fetus.

❖ Procedure:

- Preliminary amniocentesis is done by a 15 cm 18 gauge needle.
- **The amount of saline to be instilled is calculated as number of weeks of gestation multiplied by 10 mL.**
- The amount is to be infused slowly at the rate of 10 mL/min.

❑ Intra-amniotic instillation of hyperosmotic urea:

- ❖ Intra-amniotic instillation of 40% urea solution (80 g of urea in 200 mL distilled water) along with syntocinon drip is effective with less complications.
- ❖ Combination of intra-amniotic hyperosmotic urea and 15 methyl PGF₂ α reduces the induction abortion interval to 13 hours.

► Extra-amniotic:

❑ Extra-amniotic instillation of 0.1% ethacrydine lactate

- ❖ done transcervically through a number 16 Foley's catheter
- ❖ The catheter is passed up the cervical canal for about 10 cm above the internal os between the membranes and myometrium and the balloon is inflated (10 mL) with saline.
- ❖ It is removed after 4 hours. The success rate is similar to saline instillation but is less hazardous.
- ❖ It can be used in cases contraindicated for saline instillation.
- ❖ Stripping the membranes with liberation of prostaglandins from the decidua and dilatation of the cervix by the catheter are some of the known factors for initiation of the abortion.



THANK YOU