MEDICAL TERMINATION of PREGNANCY

Moderator: Prof. Dr. Krishnendu Gupta
MEDICAL TERMINATION of PREGNANCEY (induced abortion, induction of abortion) is defined as the Medical or Surgical termination of pregnancy before the time of viability of fetus.

- **~15 millions** pregnancies annually terminated in India
- **~15,000** Women die annually by unsafe illegal abortion
- Not legalized in many countries & restricted in others
MTP act was enforced to safeguard the health of mother undergoing abortion and the interest of the doctor performing procedure on her.

Act passed on 1971, enforced in April 1972 and revised in 1975.
MTP ACT – Rules

Condition under which pregnancy can be terminated

Person/persons who can perform MTP

Places where abortion can be performed
MTP Act - Conditions

CONDITIONS – UNDER WHICH PREGNANCY CAN BE TERMINATED

Five conditions that have been identified in the MTP Act

- **Therapeutic or Medical indications** – continuation of pregnancy might endanger mother. E.g.
  - Severe cardiac disease
  - End stage renal disease
  - Malignant and severe hypertension
  - Cervical, breast or other cancers

- **Eugenic** – substantial risk of child being born with serious mental/physical abnormality (handicapped)
  - Structural, chromosomal or genetic abnormalities of fetus
  - Fetus is likely to be deformed due to action of teratogenic drug or radio exposure in early pregnancy
  - Rubella infection in first trimesters

- **Humanitarian** – Pregnancy is result of rape

- **Socio-economic indications** – environment can lead to a risk of physical/mental injury of mother
  - Multiparous women with unplanned pregnancy and low socio-economic status
  - Pregnancy caused by failure of contraceptive device. This is most liberal & unique for Indian law and virtually allows abortion on request for all cases due to difficulties in proving otherwise

- When pregnant woman is not mentally sound (e.g. schizophrenia, mania etc.)
MTP ACT – Person performing

PERSONS WHO CAN PERFORM ABORTION (MTP)

- Registered medical practitioner certified to do MTP
  - MD, MS, DNB or DGO in Obs & Gyne
  - Who has done 6 months of house job in Obs & Gyne
  - Assisted in at least 25 MTP in authorized center and has certificate to do MTP

- MTP is permitted up to 20 weeks. (one doctor up to 12 weeks, 2 doctor to sign the form for 2\textsuperscript{nd} trimester). Supreme court allowed up to 24 weeks for some rape cases.

- Written consent from women. Husband's consent is NOT REQUIRED.

- For minor/Lunatic/mentally retarded – consent from parents or legal guardian
PLACE WHERE ABORTION CAN BE PERFORMED

- MTP can only be performed in Govt. hospitals, nursing homes or centers approved by DHS or CMO of district

- Reported to DHS in prescribed MTP form
  - Form-I – name, address, qualification of service provider with date, place & signature
  - Form-II – monthly statement to DHS from head of the hospital
  - Form-III – It is a register for MTP cases which needs to be kept for 5 years in hospital
MTP ACT – Form 1

RMP OPINION FORM

FORM I

(Name and qualifications of the Registered Medical Practitioner in block letters)

(Full address of the Registered Medical Practitioner)

(Name and qualifications of the Registered Medical Practitioner in block letters)

(Full address of the Registered Medical Practitioner)

I hereby certify that *I/we are of opinion, formed in good faith, that it is necessary to terminate the pregnancy of ________________________

(Full name of pregnant woman in block letters)

resident of ________________________

(Full address of pregnant woman in block letters)

for the reasons given below**

* I/we hereby give intimation that *I/we terminated the pregnancy of the woman referred to above who bears the serial No. ________________________ in the Admission Register of the hospital approved place.

(Signature of the Registered Medical Practitioner)

(Signature of the Registered Medical Practitioner)

Place: ________________________

Date: ________________________

*Strike out whichever is not applicable.

** of the reasons specified in (i) to (v) write the one which is appropriate.

(i) in order to save the life of the pregnant woman,

(ii) in order to prevent grave injury to the physical and mental health of the pregnant woman,

(iii) in view of the substantial risk that if the child was born it would suffer from such physical or mental abnormalities as to be seriously handicapped,

(iv) as the pregnancy is alleged to have been caused by rape,

(v) as pregnancy has occurred as a result of failure of any contraceptive device or methods used by married women or her husband for the purpose of limiting the number of children.

Note: Account may be taken of the pregnant woman's actual or reasonably foreseeable environment in determining whether the continuance of her pregnancy would involve a grave injury to her physical or mental health.

Place: ________________________

Date: ________________________

(Signature of the Registered Medical Practitioner/Practitioners)
Contraindications

There are few contradictions but performing MTP on following condition needs to be very careful.

- Medical disorders like heart disease
- Suspected ectopic pregnancy or undiagnosed adnexal mass
- Chronic renal failure
ABORTION PROCEDURE

Procedure to follow before MTP

History
- Check history of patients:
  - Period of gestation
  - Prior obstetric history
  - Complication on earlier abortion
  - Contraceptive history
  - Allergies or intolerances
  - Acute or chronic illness

Physical Examination
- A brief examination includes vital signs, auscultation of heart and lungs and palpation of abdomen
  - A thorough pelvic examination to determine
    - Size of pregnant uterus
    - Position of uterus
    - Presence of any other pelvic

Laboratory Tests
- ABO & Rh typing
- Hemoglobin / Hematocrit
- Urine for albumin & sugar
- Genital infection to be treated before abortion
  - Urine Pregnancy test
  - Pelvic ultrasonography if case of a real doubt on gestation
METHODS OF ABORTION

Surgical methods (upto 12 weeks)

Surgical methods (less commonly done)

First Trimester (up to 12 weeks)

Up to 12 weeks

13-20 weeks

Second Trimester (13-20 weeks)
METHODS OF ABORTION

**Surgical**

**Up to 12 weeks**
- Manual vacuum aspiration (MVA)
- Suction evacuation
- Dilatation and evacuation (D&E)
- Dilatation and curettage (D&C)

**13-20 weeks**
- Dilatation and evacuation (up to 16 weeks)
- Dilation and extraction (between 13-15 weeks)
- Hysterotomy (rarely required for intractable cases) (16-20 weeks)

**Advantage**
- Quicker
- More certain
- Can be done under general or local anesthesia

**Disadvantages**
- Invasive
- Small risk of uterine, cervical and bowel injury or infection
METHODS OF ABORTION

Surgical methods (upto 12 weeks)

Medical methods (less commonly done)

Medical methods (methods of choice)

First Trimester (up to 12 weeks)

Up to 12 weeks

13-20 weeks

Second Trimester (13-20 weeks)
### METHODS OF ABORTION

#### Medical

**Advantage**
- Avoid surgery & anesthesia
- More natural, like menses
- Less painful
- Easier and entertains women’s wishes

**Disadvantage**
- Bleeding, cramping, nausea
- Waiting, uncertainty of success
- Extra clinic visit & compliance needed
- Need surgical for failure

#### UP TO 12 WEEKS

1. Mifepristone (RU 486) alone less effective
2. Misoprostol alone (less effective)
3. Mifepristone and Misoprostol (PGE$_1$) (most commonly used method being effective)
4. Methotrexate and Misoprostol

#### 13-20 WEEKS

1. Various prostaglandins $E_2$, $F_2\alpha$, $E_1$
2. Extra-amniotic-ethacridine lactate, prostaglandins (PGE$_2$, PGF$_2\alpha$)
3. Intra-amniotic hyperosmotic fluids - hypertonic saline 20%, 40% urea, mannitol
4. Intravenous high dose oxytocin
5. Anti-progesterones – RU486 (Mifepristone) – intramuscular & oral
6. Methotrexate – intramuscular & oral
7. Various combinations of the above
## FIRST TRIMESTER - Surgical

<table>
<thead>
<tr>
<th>Surgical method</th>
<th>Details</th>
</tr>
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<tbody>
<tr>
<td>Manual vacuum aspiration (MVA)</td>
<td>• Does not need suction machine and electricity and hence ideal for rural settings  &lt;br&gt;• It uses hand operated 60 ml syringe and 6 mm cannula  &lt;br&gt;• Usually performed up to 8 weeks. Until 8 weeks no cervical preparation is required, after 8 weeks suction evacuation is preferred</td>
</tr>
<tr>
<td>Suction evacuation</td>
<td>• The products of conception are removed from the uterine cavity using a Karman’s cannula attached to a suction machine operated by electricity or battery  &lt;br&gt;• It is the procedure of choice for MTP</td>
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## Surgical method Details

| Dilatation and evacuation (D&E) | • Rapid method (one stage procedure)– Method using ovum forceps, used as an outdoor procedure with Diclofenac and Diazepam sedation and para-cervical block anesthesia  
  • Slow method (two stage procedure)– 
    • Stage 1: Involves insertion of luminaria tent or synthetic hygroscopic dilator into the cervix for its slow and gradual dilatation. Misoprostol (PGE$_1$) 200-400 µg to be given 3 hours prior for lesser pain and avoid side effects. Most obstetricians use misoprostol in current practice  
    • Stage 2: Evacuation is performed after at least 6 hours so that cervix is dialated. Same step like D&E are followed |

| Dilatation and curettage (D&C) | It consists of dilatation of cervix with dilators followed by uterine curettage with a curette |
**FIRST TRIMESTER - Medical**

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<td>Mifepristone (RU 486) alone less effective</td>
<td>• Mifepristone is not used alone due to poor success rate (60%)</td>
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<tr>
<td>Misoprostol alone (less effective)</td>
<td>• Misoprostol 800 µgm vaginally repeated for up to 3 doses can be used but is less effective than combination with Mifepristone</td>
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| Mifepristone and Misoprostol (PGE1) (most commonly used method being effective) | • Mifepristone is a 19-norethindrone analogue with high affinity for progesterone receptors. It acts as a progesterone antagonist and removes progesterone support of trophoblast attachment to decidua in early pregnancy resulting in decidual necrosis, increased prostaglandin production and uterine contractions.  
  • Misoprostol is a prostaglandin E₁ analogue. It softens the cervix and causes strong uterine contractions.  
  • Usually Mifepristone kills the embryo while Misoprostol expels it out  
  • 95% success rate is used before 7 weeks                                                     |
| Methotrexate and Misoprostol                         | Alternatively, Methotrexate 50 mg/m² and Misoprostol 800 µgm7 days later may be used. However, this combination is less popular to cytotoxic effects of methotrexate |
SECOND TRIMESTER

Between 13-15 weeks

- Termination is difficult at this time as the uterus is relatively resistant to the action of uterotonics.
- Various methods like dilatation and evacuation, prostaglandins by different regimens or extra amniotic installation of Ethacridine lactate can be used.
- Alternatively, procedure may be deferred by 3-4 weeks to enable pregnancy to go beyond 16 weeks, when the method is more effective.
SECOND TRIMESTER

Between 16-20 weeks
Various medical and surgical methods are used

**Surgical methods (less commonly done)**
- Dilatation and evacuation (up to 16 weeks)
- Dilation and extraction (between 13-15 weeks)
- Hysterotomy (rarely required for intractable cases) (16-20 weeks)

**Medical methods (methods of choice)**
- Various prostaglandins $E_2$, $F_2\alpha$, $E_1$
- Extra-amniotic-ethacridine lactate, prostaglandins ($PGE_2$, $PGF_2\alpha$)
- Intra-amniotic hyperosmotic fluids = hypertonic saline 20%, 40% urea, mannitol
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- Anti-progesterones – RU486 (Mifepristone) – intramuscular & oral
- Methotrexate – intramuscular & oral
- Various combination of above
Summary

Menstrual regulation can be used. Manual vacuum is safe until 10h week. One performer. Carboprost (PFG\(_{2}\alpha\)) or misoprostol administration extra-amniotically can also be used. Exception by Supreme court – for rape cases by.

Termination is difficult:
13-15 weeks

First Trimester (up to 12 weeks)

Second Trimester (13-20 weeks)

Medical methods (methods of choice):
16-20 weeks
THANK YOU