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MEDICAL TERMINATION OF PREGNANCY- AN OVERVIEW

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ABSTRACT

Medical Termination of Pregnancy (MTP) is indicated under the conditions as laid down in the MTP act 1971 of India. MTP act ensures the correct intervention depending upon the stage of unwanted pregnancy thereby minimizing the chance of illegal abortions which is the reason for higher mortality and morbidity in India. Available methods are Medical in the early pregnancies and surgical comprising of Dilatation and curettage in late pregnancies. However MTP Act 1971, permits abortions only up to 20 weeks of the pregnancy. This review discusses the current methods of Medical abortions available in India.

KEYWORDS: **abortion, MTP act 1971, mifepristone, misoprostol, methotrexate.**

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INTRODUCTION

As per the statistics released by the consortium on the national consensus for medical abortion in India there are about 11 million abortions taking place annually and around 20000 women die due to abortion related complications. Most of the deaths are attributed to the illegal abortions conducted by untrained persons at places not approved for the purpose.2012 data show about 2529979 abortions(1).India has made abortion legal since 1971 which falls under MTP act enacted by the parliament and came into effect from 01 April 1972, current being the MTP regulations and rules 2003(2).

MTP act 1971

MTP act clearly defines the conditions and situations under which an MTP can be performed, persons who are qualified to conduct the abortion and place at which MTP can be performed.

Women who qualify for MTP are as under:

1. Woman whose physical and or mental health was endangered by the pregnancy.
2. Woman facing the birth of a potentially handicapped or malformed child.
3. Rape
4. Pregnancy in unmarried girls under the age of 18 years (MTP with the consent of a guardian).
5. Pregnancies in mentally unsound (MTP with the consent of a guardian).
6. Pregnancies that result from failure of sterilization or contraception

Sex selective abortion is strictly prohibited by Indian law since 1994

Abortions in India can be done till 20 weeks of pregnancy but the opinion of a second doctor is necessary between 12 weeks and 20 weeks. Only registered medical practitioner as described in MTP act are authorized to conduct the MTP.

METHODS OF ABORTIONS

In the year 2000 FDA approved the Mifepristone/ misoprostol regimen for the elective medical abortion till 7 weeks of pregnancy or 9 weeks (with alternative regimens). While surgical abortions (Dilatation and Curettage) can be done till 20 weeks of pregnancy. Advantages of Medical abortions include avoidance of surgery and the anesthesia in the very first place which considerably increases the acceptability of this method (3) (4)***.*** However surgical abortion provides a shorter time of completion as well as shorter duration of bleeding. Medical termination also has a higher failure rate which is defined by the need to perform a surgical abortion for completion (5). A Cochrane review found surgical evacuation more superior over the medical methods of abortion using mifepristone and misoprostol (6).

Medications for abortion

1. ***Mifepristone***: It is a progesterone receptor blocker; block the actions of progesterone on the uterus leading to increased uterine contractions. It also softens and dilates the cervix. Dose range is 200mg to 600mg per oral and major adverse effects are abdominal pain, uterine cramps, nausea, vomiting, diarrhea and rarely toxic shock syndrome. Contraindications to its use include severe anemia, chronic corticosteroid administration, severe kidney disease, severe liver disease, porphyria, clotting disorder and ectopic pregnancy (7) (8).

2. ***Misoprostol****:* It is a prostaglandin analogue (PGE1) and interacts with prostaglandin receptors on myometrium causing strong myometrial contractions which lead to expulsion of embryonic or fetal tissue. It also causes cervical softening and dilation. It is used in dose range of 400mcg to 800mcg per oral or per vaginum. Major side effects

being diarrhea, vomiting, nausea, uterine cramps and bleeding (9) (10)

3. ***Methotrxate:*** it is an antimetabolite, blocks dihydrofolate reductase enzyme thus inhibiting folate production and DNA synthesis in the rapidly dividing cells including trophoblasts. The dose range is 50mg per square meter body surface area intra muscularly or 25 to 50mg per orally. Major adverse effects are nausea vomiting, hot flushes, diarrhea, uterine cramping with bone marrow hypoplasia, liver and kidney disease, thrombocytopenia being the major contraindications(11).

Regimens used for Medical abortions

FDA approved regimen which can be used only up to 49 days after the Last Menstrual Period (LMP), include mifepristone 600mg orally on day one followed by misoprostol 400mcg orally on day 3 and follow up at the clinic on days 12 and 20 (12)(13).In India the current regimen followed is mifepristone 200mg orally on day one followed by 400mcg orally on day three and subsequent visit to clinic on day 15(14). Like FDA approved regimen, regimen used in India is given till 49 days after LMP, the only difference being that the lower dose of mifepristone is used (200mg) which considerably lowers the cost of treatment. One study has shown efficacy of 200mg mifepristone orally followed by 800mcg misoprostol used vaginally in 2000 women at 63 daysafterLMP(15)(16)***.*** Methotrexate based regimen involve 25mg to 50mg of methotrexate orally followed by misoprostol 800mcg vaginally after 5 to 7 days. This regimen showed efficacy of 91% at 56 days after LMP (17).

Complications of Medical abortion

The most common complication of Medical abortion is bleeding which is an expected event and in some cases requires transfusion. There may be incomplete abortion or hemostasis or continuing pregnancy which then requir surgical intervention (18). Other side effects are related to the drugs used for Medical abortion and are limited to the duration of treatment (19).

Pain management following abortion remains topic of debate about the optimal dose or the choice of analgesic (20).

Contraindications for medical abortion :(14)

a. Early medical abortion is contraindicated in women with

• Smoking> 35 years
• Anemia – hemoglobin < 8 gm. %
• Suspected /confirmed ectopic pregnancy / undiagnosed adnexal mass
• Coagulopathy or women on anticoagulant therapy
• Chronic adrenal failure or current use of systemic corticosteroids
• Uncontrolled hypertension with BP >160/100mmHg
• Cardio-vascular diseases such as angina, valvular disease, arrhythmia
• Severe renal, liver or respiratory diseases
• Glaucoma
• Uncontrolled seizure disorder
• Allergy or intolerance to mifepristone / misoprostol or other prostaglandins
• Lack of access to 24-hours emergency services.

b. Relative contraindications where drug needs to be used cautiously

- Pregnancy with an intrauterine device (IUD) in situ: IUD has to be removed before medical abortion.
- Pregnancy with fibroid: Women with symptomatic large fibroids encroaching on endometrial cavity can have heavy bleeding and fibroids may interfere with uterine contractility
- Pregnancy with uterine scar: Caution should be exercised when medical abortion is offered to patients with previous history of caesarean section, hysterotomy or myomectomy.
- Use of anti-tubercular drugs: Induction of hepatic microsomal enzymes by anti tubercular drugs may interfere with the medical abortion pill efficacy.

c.Failure of patient to understand the procedure for any reason.

CONCLUSION

Medical abortion is the preferred method of MTP if all the criterions are met. Pregnancies beyond 20 weeks might be terminated under extreme circumstances e.g. diagnosis of a fetal malformation (21).Prescription can be given for home based treatment only when adequate medical attention and compliance can be ensured. Various studies have also shown no difference in the acceptability and effectiveness between home based and clinic based medical abortion (22). However MTP act requires such treatment should be administered in the presence of a trained medical practitioner only. Use of lower doses of the drugs e.g. Mifepristone 200mg instead of 600mg considerably bring downs the cost of treatment without any distinctive change in the outcome. Thus it is recommended that all those who meet the criteria for Medical abortion should be given the medication as first choice while reserving the surgical intervention for the abortions taking place 49days after LMP or where the medical abortion is contraindicated in the first place. Both Medical and surgical intervention for the MTP should be done in accordance with the MTP act 1971 and women should encouraged to avail the medical facilities provided by the trained medical personnel.

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