Editorial

Medical Method - Option for Early MTP

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The year 2001 was declared as the year of Safe Abortion by the Ministry of Health and Family Welfare, Govt. of India. Safe abortions are supposed to save lives but inspite of a liberal MTP Act, approximately 15% of maternal deaths are attributed to unsafe abortions. There has been a constant endevour to make abortions safer and accessible to women. Although the idea of using medications to induce a late menses or cause abortion dates back centuries. Medically proven regimes are available only in the last 50 years.

The Mifepristone also known as RU – 486 – Misoprostal abortion holds great promise. It was in the 70's that researchers found that natural prostaglandins such as $PGF_{2\alpha}$ and PGE were effective in inducing abortion when administered intravaginally or intracervically.

It was Etienne – Emile Baulieu in 1982 who discovered and developed Mifepristone. Chemically this is 11β (4 dimethylamino phenyl) 17β hydroxy 17 α (1 propynl) estra 4, 9, dien 3 one. It is a derivative of norethindrone. It has an antiprogestational effect, weak antiglucocorticoid and antiandrogenic activity. It does not have estrogenic, antioestrogenic, mineralocorticoid or antimineralocorticoid activity.

When used as an abortifacient Mifepristone acts as an antagonist at progesterone receptors in the endometrium and trophoblast, causing softening and dilatation of the cervix allowing prostaglandins to stimulate uterine contractions, leading to the detachment of the conceptus from the uterine wall and expulsion of the enmbryo. There is a decline of HCG and progesterone causing sloughing of the endometrium.

Bioavailability after oral ingestion is high. Although it has a half life of 20 hours, it is effective for several days, therefore it can be used as a single dose.

To make this method of termination more effective a small dose of prostaglandins may be given. The analogues used included sulprostone a PGE analogue, gemeprost a PGE_1 analogue, metanoprost a PGE_2 analogue or the PGE_1 analogue misoprostal. Misoprostal is the PG of choice in medical abortion as it is well absorbed from GI tract and vaginal mucosa, it is stable at room temperature, it is cheap and has fewer GI side effects.

"Mifepristone only" therapy for Termination of early pregnancy was evaluated initially in clinical studies with mifepristone doses varying from 50 – 800 mgm. Standard dose was 200-600 mgm. as a single dose. Lesser doses of 50 – 200 mgm. were used for 4-7 days. Complete abortion rate varied from 85% when the period of amenorrhoea was 35 days, to 40-50% when amenorrhoea was 63 days. When the period of amenorrhoea was 49 days, the rates varied from 50-86%.

There are also several studies which have evaluated the efficacy of various regimes of mifepristone followed 36-48 hours later by misoprostal in terminating early pregnancy in women with amenorrhoea of 49-63 days. Complete abortion rates in this regime varied from 92.1% in the U.S. trials to 95.5% in the French trials. In view of these high rates of success, today it is customary to use the combination for early medical termination of pregnancy.

Currently in India, Mifepristone has been approved for use in Medical termination of intrauterine pregnancy through 49 days as counted from the first

day of the last menstrual period in a 28 day cycle.

The duration of the pregnancy may be determined from the menstrual history, clinical examination or ultrasonographic scanning, ultrasonography is helpful in ruling out an ectopic pregnancy also. 48 hours later 400 mgm. of Misoprostal is administered as a single oral or vaginal dose.

As this is a Medical method of termination of Pregnancy it comes under the purview of the MTP Act which as yet does not have a separate section for Medical methods of Termination of Pregnancy. Though as yet it is a grey zone, the indications for termination, the qualifications of the care giver, registration of the place where the drug / drugs can be administered, consent from patient, record keeping and reporting should follow the rules laid down in the MTP Act.

Contraindications to administration of Mifepristone and Misoprostal :

- Gestational age beyond acceptable criteria.
- Confirmed or suspected ectopic pregnancy or undiagnosed adnexal mass.
- IUD in place.
- Chronic adrenal failure.
- History of allergy to Mifepristone, Misoprostal or other prostaglandins.
- Haemorrhagic disorders or concurrent anticoagulant therapy
- Inherited porphyrias.
- If patient does not have access to medical facilities equipped to provide emergency treatment of incomplete abortion, blood transfusion and emergency resucitation during the period from the first visit till discharged by the administering physician.

At present there are several dosage schedules being used :

- 600 mgm of Mifepristone on Day 1 followed 48 hours later (D3) by 400 mg of Misoprostal orally or vaginally.
- 200 mgms of Mifepristone on D1 followed by 400 mgm of Misoprostal 48 hours later on D3 has currently been proved to be very effective.

It is important to give Mifepristone under medical supervision and after proper counseling especially regarding the bleeding and cramps which are expected and how to contact a backup emergency facility in case of an unexpected complication.

The patient must be explained :

- The necessity of completing the treatment schedule, including a follow up visit approximately 14 days after taking Mifepristone.
- That vaginal bleeding and uterine cramping will probably occur.
- That prolonged or heavy vaginal bleeding is not proof of a complete expulsion.
- That if the treatment fails there is risk of fetal malformation.
- That Medical abortion treatment failures are managed by surgical termination.
- The steps to take in an emergency situation including precise instructions and telephone numbers she can call if she has any problems or concerns.

Counseling regarding contraception is also important if you want to prevent the woman using medical methods to terminate pregnancy repeatedly.

Common adverse events like abdominal pain, cramping, headache, nausea and vomiting are expected, but sometimes there is a sudden fall inHb due to excessive and prolonged bleeding and it should be looked for.

Though in few women the abortion may take only a few hours after the administration of Misoprostal, bleeding in many is present from 8 to 16 days.

If the woman is RH-ve, anti-D may be given.

Advantage of medical methods for pregnancy termination are many. It can be offered at an earlier stage, and more privacy is possible. This method does not require a high degree of training of care givers, it has a lower complication rate in fact there is no risk of perforation and most importantly it has no effect on future fertility.

But this method takes a longer time approx 9 days, needs at least 3 clinic visits, and may sometimes be responsible for severe bleeding.

This method has successfully been tried in less developed countries like Tunisia and Vietnam where women were given choice of home administration of Misprostal and it was a success there.

It is important to use this method judiciously under supervision if it has to prove a successful method of early pregnancy termination in the long run. It should be offered as an option to women desiring early abortion.

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