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Original Research Article

Prospective study of complications of first trimester medical termination of pregnancy at tertiary care center

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ABSTRACT

Background: MTP (is common procedure done by obstetrician under certain circumstances as per MTP rules and guideline, but it has certain complication and data about complication are not fully available. The aims of this study are to analyse various complication and causes of this complication following MTP presenting at our hospital.

Methods: This study was conducted in 100 patients coming to Pannadhay Rajkiya Mahila Chikitsalaya, RNT Medical college, Udaipur attending OPD (including emergency OPD) and IPD during August and September 2019 after MTP. This Study also included maternal mortality among all women participated in the study.

Results: A total of 100 cases included in study attended OPD (including emergency OPD) and IPD during study period. All cases were eligible for inclusion in the study. Medical method of abortion (MMA) was the most common method of termination of pregnancy adopted by patient. Prolonged bleeding, anaemia and Incomplete abortion was the common complication related to MTP and manual vacuum aspiration was done in majority of cases to manage incomplete abortion in our hospital setting.

Conclusions: The high rate of MTP related morbidity is due to induced abortion continue to be done at inappropriate places using inappropriate methods by person not eligible to do so.

Keywords: Abortion, First trimester medical termination of pregnancy, Medical method of abortion

INTRODUCTION

MTP is common procedure done by trained medical professionals under certain circumstances as per MTP rules and guideline. But it has certain complication and data about complication are not fully available. According to the first national study of the incidence of abortion and unintended pregnancy in India, an estimated 15.6 million abortions were performed in the country in 2015.

This translates to an abortion rate of 47 per 1,000 women aged 15-49, which is similar to the abortion rate in neighbouring South Asian countries. The study published today in "The Lancet Global Health" was conducted jointly by researchers at the International Institute for Population Sciences (IIPS), Mumbai; the population

council, New Delhi; and the New York based Guttmacher Institute. It also found that the vast majority of abortions (81%) were achieved using medication abortion (which, in India, is commonly referred to as medical methods of abortion, or MMA) that was obtained either from a health facility or another source. Fourteen percent of abortions were performed surgically in health facilities, and the remaining 5% of abortions were performed outside of health facilities using other, typically unsafe, methods.¹ Medical termination of pregnancy act - The Indian parliament passed the medical termination of pregnancy (MTP) Act in 1971 with the goal of regulating and ensuring access to safe abortion.²

Who can perform - only registered allopathic medical practitioners. At place - at certified abortion facilities to perform abortions.

Uterine evacuation methods

For first trimester termination

- A. Vacuum aspiration
- Manual vacuum aspiration (MVA) - up to 12 weeks of pregnancy

- Electric vacuum aspiration (EVA) - up to 12 weeks of pregnancy.
- B. Medical methods of abortion (MMA-by mifepristone and misoprostol) - up to seven weeks of gestation.

Table 1: Protocols for mifepristone and misoprostol.

Day	Drugs used
Day 1: mifepristone administration	200 mg mifepristone oral; anti D 50 mcg, if Rh negative,
Day 3: misoprostol administration	Up to 7 weeks; 400 mcg misoprostol (two tablets of 200 mcg each) sublingual/buccal/vaginal/oral “or” 7-9 weeks: 800 mcg sublingual/buccal/vaginal. In addition <ul style="list-style-type: none"> • Analgesics (Ibuprofen) • Antiemetic • Offer contraception.
Within day 15: follow-up day	<ul style="list-style-type: none"> • Confirm and ensure completion of procedure. • Offer contraception, if not already done so.

For second trimester termination methods

- A. Medical methods
- Mifepristone and misoprostol regime
 - Misoprostol alone regime
 - Extra amniotic ethacridine lactate instillation supplemented by oxytocin
 - Mechanical methods supplemented by oxytocic.
- B. Surgical methods
- Dilatation and evacuation (D and E) (up to 15 weeks of gestational age)
 - Hysterotomy.

Indications

In order to save the life of the pregnant woman,

- In order to prevent grave injury to the physical and mental health of the pregnant woman
- 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
- As the pregnancy is alleged by pregnant woman to have been caused by rape
- As the pregnancy has occurred as a result of failure of any contraceptive device or methods used by married woman 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.

Mandatory documentation

- Form C: consent form
- Form I (RMP opinion form): RMP shall certify this form within three hours from the termination of pregnancy
- Form II (monthly reporting form) head of the hospital or owner of the place shall send a monthly statement of cases to the CMO of the district in this form
- Form III (admission register): an approved site shall maintain case records in Form III. This register is kept for a period of five years from the date of last entry.

All the above forms are to be filled for both surgical as well as medical methods of abortion.

Consent

In case of a woman more than 18 years only the consent of the woman is required to terminate pregnancy. Consent for the abortion is not required from the woman’s husband or from other family members. In case of a minor (less than 18 years) or a mentally ill person, consent of a guardian is required. (Guardian means a caretaker willing to be responsible for the woman).

Gestational age

The act allows an unintended pregnancy to be terminated up to 20 weeks' gestation; however, if the pregnancy is beyond twelve weeks, a second doctor's approval is required.

In 2010, the national training and service delivery guidelines of comprehensive abortion care were issued and included both surgical and medical guidelines. These guidelines mention that medical abortion with mifepristone and misoprostol may be provided up to 63 days' (nine weeks) gestation.^{3,4}

Prophylactic antibiotics for vacuum aspiration and dilatation and evacuation

Prophylactic antibiotic regimens - doxycycline 200 mg orally within 1 hour before procedure, American College of obstetricians and gynecologists (ACOG, 2018). In study hospital setting authors uses prophylactic antibiotic for all patient.

Prophylactic antibiotics for medical abortion

The American College of obstetricians and gynecologists (2014), the Society of Family Planning (Achilles and Reeves, 2011), the Royal College of obstetricians and gynecologists (2015) and the World Health Organization (WHO, 2014) do not recommend routine antibiotic use prior to medical abortion. In study hospital, antibiotic not used for MMA as per protocol.

According to the WHO clinical management guidelines, the first step in MVA should be to assess the woman's need for pain control and administer it as necessary.⁵ Pain medication was given to all women undergoing Vacuum Aspiration. Non-steroidal anti-inflammatory drugs (NSAIDs) are recommended either prophylactically or at the time cramping begins.

In some cases, if suspected of GTD or any other pathology, specimen sent for histopathological examination.

Although MTP act is very liberal and patient friendly than also patient goes to untrained unrecognized-sector providers, including chemists and other vendors.^{6,7}

Unsafe abortion is 'a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both'.⁸ Of note 'unsafe' is not a synonym for 'illegal' or 'clandestine'. For example, legal abortions may be unsafe because of poorly trained clinicians, inadequate facilities, or both.

Complications related to MTP includes

- PID

- Anaemia
- Incomplete abortion
- Injury to genital tract (including perforation)
- Septic shock
- Hypovolemic shock.

Bleeding is generally a part of the normal course of an abortion. Only heavy bleeding (>12 hour) or longstanding bleeding (21 days) was included in bleeding complication. Some cases of prolonged bleeding cause severe anaemia (<7 gm/dl) and these patients need hospitalization for transfusion of blood and blood component.

Infection related to MTP are usually caused by ascending bacterial infection such as chlamydia, gonorrhoeal, mycoplasma and bacterial vaginosis (BV) from the lower genital tract via cervix to uterus. Infection of fallopian tube may cause infertility in future. Usually these patients come with bleeding, offensive vaginal discharge, lower abdominal pains and fever. In severe cases patient may come in shock also.

Maternal mortality is a key indicator of women's health and social status, and levels in India are unacceptably high.⁹ The maternal mortality ratio (MMR) for India is 130/100,000 live births (RGI-SRS: 2014-16) and unsafe abortions account for 8% of the MMR. Many of those who survive these procedures often suffer from chronic, debilitating diseases that have a bearing on the future reproductive health of the woman. By using safe abortion techniques as per rule, authors can decrease this mortality which is 8% of total MMR.

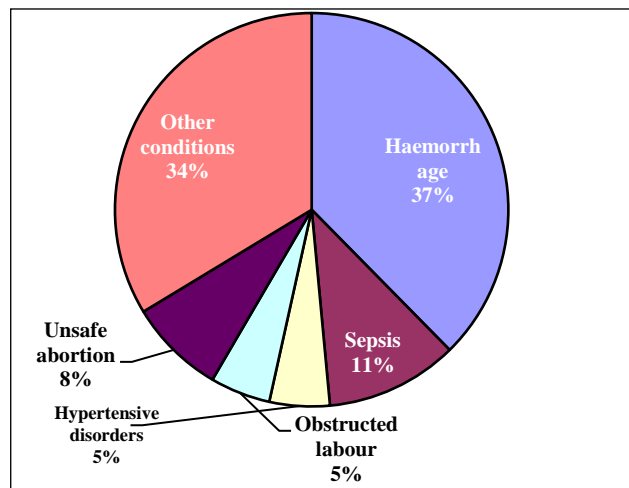


Figure 1: Major causes of maternal mortality.

Evidence from several community- and facility-base studies indicate that when women with an unwanted pregnancy, many women first attempt to terminate the pregnancy on their own, by using drugs purchased from a chemist without a prescription.¹⁰⁻¹² Easy access to medicine from chemists has greatly contribute to an increase in unsafe abortion.¹³

Although there is little evidence on the safety or effectiveness of these (Ayurvedic, homeopathic and other allopathic drugs) drugs. Drug sellers lack knowledge about medical abortion, give wrong information to clients.

Data on the provision and quality of contraceptive counselling and services for abortion clients in India is limited. Studies from various settings in India also show that many women (49-96%) want contraceptive methods after an abortion, although evidence suggests that many women receive inadequate or no post abortion contraceptive counselling or services.¹⁴⁻¹⁶ It is calculated that three out of four unsafe abortions may be eliminated if the need for family planning were fully met.

Incomplete abortion, post abortion sepsis, haemorrhage and genital trauma that reach hospital are the visible consequences of unsafe abortion, these serious complication typically indicate the use of an unsafe method.¹⁷ For every identified hospital case, there are many other women who have had an unsafe abortion, but who do not seek medical care, either because they do not have sufficiently worrying complications or because they fear abuse, ill-treatment or legal reprisals.^{18,19}

The aim of this study was to analyse various complication and causes of this complication following MTP presenting at study hospital.

METHODS

This study was conducted in 100 patients (29 on OPD basis, 71 indoor) coming to Pannadhay Rajkiya Mahila Chikitsalaya, RNT Medical college, Udaipur attending OPD (including emergency OPD) and IPD during August and September 2019 after MTP. This Study also included maternal mortality among all women participated in the study.

During the study period abortion records were collected prospectively. Data collected included the number of previous induced and spontaneous abortions, parity, length of current pregnancy, results of bacterial screening, prescribed antibiotic treatment, and the chosen abortion method. Women were followed through the patient records system to determine the rate of complications. All patients who had a visit with a doctor at the gynecological clinic within 30 days after the abortion were included. Review of patient records and entered into the spreadsheet as an infection, bleeding, incomplete abortion, or other.

RESULTS

During the period of study, there were a total of 100 cases of complication of MTP included in study. All these patients were interviewed for the study.

Table 2 shows - out of these total patients 55 patient took MMA without any prescription of legal practitioner, 24 patients took MMA from recognized/ trained medical professional, 12 patients underwent surgical type of MTP method, and 9 patients took unknown medicine / not giving history/lying/others.

Table 2: Method of termination of pregnancy.

Method of termination of pregnancy	Percentage
Medical method of abortion without prescription	55%
Medical method of abortion with prescription	24%
Surgical method (MVA, S and E, D and C)	12%
Unknown/ not giving history/lying/ others	9%

Table 3: Patient complaints.

Patient complaints	Percentage
Bleeding PV	86%
Pain abdomen	12%
Fever	4%
Foul smelling discharge	4%

Table 3 shows - a total 86% patient had complaint of bleeding per vaginum, 12% pain abdomen, 4% fever, and 4% foul smelling discharge.

Table 4: Post abortion complication.

Complication	Percentage
Incomplete abortion	91%
Anaemia (Hb >7 gm/dl to 10 gm/dl)	80%
Severe anaemia (Hb <7 or equal to gm/dl)	8%
Infection	5%
Injury to genital tract (i/c uterine perforation or any)	2%
Septic shock	0%
Hypovolemic shock	2%
Other	0%

Table 5: Various mode of management.

Management	Percentage
Evacuation by MVA	92%
Managed by medical method	8%
Antibiotic oral	86%
Antibiotic intravenous	14%
Blood and blood products	10%
Inj. iron sucrose	35%
Intravenous fluid	5%
ICU admission	2%

Table 4 shows - a total 91% patient had incomplete abortion (most common), 5% infection, 2% had injury to genital tract, and 2% hypovolemic shock. Incomplete abortion is most common type of post abortion complication. 8% patient had haemoglobin level of <7 gm/dl, anaemia in these patients may be due to pre-existing anemia or due to prolonged/excessive bleeding.

Table 5 shows - manual vacuum aspiration (MVA), a portable, nonelectric device for uterine evacuation, was used to manage 92% of women admitted with incomplete abortions. Sharp curettage was not done in any patient. 8% patient managed with medical management. All patient received analgesic for pain relief. 86% patient received oral antibiotic and in 14% authors need injectable antibiotic to manage post abortion complication like septicaemia. 10% women treated with blood and blood products. No any patient needs laparotomy/hysterectomy during study period. Maternal mortality due to unsafe abortion during study period is nil in this study cases.

DISCUSSION

During the period of study, there were a total of 100 cases of complication of MTP included in study. All these patients were interviewed for the study.

Similar studies by Adanu et al there have been three previous studies on abortion at the Korle-Bu teaching hospital which have studied the epidemiology and complications of induced abortions showed high rates of medical abortion with prescription.²⁰ Ampofo and Lassey showed that the majority of women had undergone medical method of abortions (Table 1).^{21,22}

Adanu et al had similar results, wherein they showed high rates of patient complications as bleeding per vaginal followed by pain abdomen and foul-smelling discharge. Ampofo and Lassey showed that the majority of women had undergone medical method of abortions had bleeding per vaginal and foul-smelling discharge (Table 2).²⁰⁻²²

Similarly, in a study by Carlsson et al the main finding after compiling the results was an increasing number of complications after medical abortions.²³ Incomplete abortions were found to be the most common complication. Concerning medical abortions >12 weeks and surgical abortions, it has been difficult to discern whether there are any trends since the numbers of medical abortions >12 weeks and surgical abortions are low and the cases of complications are few.

The frequency of infections after induced abortions appeared to be equal or even lower among patients who had a bacterial infection upon screening and therefore did receive antibiotics. Despite bacterial screening, there were still patients who suffered from infectious complications (Table 3).

CONCLUSION

Nearly 79% patient of who came with MTP complication took medicines for termination of pregnancy and out of which 69% patient took medicine/pill without any prescription.

Majority of users of MTP purchase the medication from chemists or other informal vendors and receive limited or inaccurate information without counselling. Inappropriate use of MTP kit, unapproved drug, ineffective drug, taking approved drug incorrectly all these contribute to post abortion complication.

In this study authors conclude that females are taking medicine from shop or directly from quacks, without legal protocol, probably because they are getting medicine easily without prescription/identity, this can be minimized by proper IEC.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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