

Termination of Pregnancy: A Review of its Methodology and Post-Abortion Care

Abstract

Termination of pregnancy is commonly performed in the practice of gynaecology and can be conducted via the medical or surgical routes. Complications can arise from both routes and may be physical or psychological in nature. Interventions should be implemented to make the process more bearable for the patient such as facilitating abortion at home, reducing the need for clinic follow-up and providing psychological support to those at risk. In this review, we will discuss new updates with respect to various aspects of abortion, including the concept of self-management in medical abortion and the follow-up plans, cervical priming for surgical abortion, contraceptive options after abortion and psychosocial issues surrounding abortion.

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Introduction

Termination of pregnancy is one of the most common procedures performed in the practice of gynaecology and about 42 million pregnancies worldwide end in an abortion. Complications arising from abortions can be both physical and psychological and hence the prevention of unintended pregnancies is key. In this review, we will discuss new updates with respect to various aspects of abortion, including the concept of self-management in medical abortion and the follow-up plans, cervical priming for surgical abortion, contraceptive options after abortion and psychosocial issues surrounding abortion.

Medical abortion

Medical abortion is a method of pregnancy termination which allows women to play a more active role in their abortion process, makes them feel in control of the process and also increases flexibility and convenience in planning the timing of their abortion. The recommended regimen for first trimester medical abortion by the World Health Organisation (WHO) is the oral administration of mifepristone 200mg followed by misoprostol tablets 24-48 hours later depending on the gestation (Table 1). Misoprostol-only regimen is also available for countries where mifepristone is not available.¹

Table 1 Recommended medication regimen for first-trimester medical abortion (WHO)

| | Up to 9 weeks | 9-12 weeks |
|--------------------------------|---|--|
| Oral mifepristone 200mg | | |
| Mifepristone and misoprostol | Vaginal, buccal or sublingual misoprostol 800ug or oral misoprostol 400ug (if no more than 7 weeks), 24-48 hours after mifepristone | Vaginal misoprostol 800ug then vaginal or sublingual misoprostol 400ug every 3 hours up to 5 doses, 36-48 hours after mifepristone |
| Misoprostol-only regimen | Vaginal or sublingual misoprostol 800ug every 3-12 hours up to 3 doses | |

The traditional model of medical abortion is the three-clinic-visit model which includes a first visit to initiate the abortion process,

receive counselling and take mifepristone, a second visit generally 2 days later to take or be given misoprostol and a follow-up visit 1 to 2 weeks later to confirm completion of abortion.² Current WHO guidelines however endorses home use of misoprostol following provision of mifepristone at a health care facility as this can improve the privacy, convenience and acceptability of services without compromising on safety.¹ There has also been increasing evidence for self-management in medical abortion, this refers to the overall management of the medical abortion process when one or more aspects of the process occur outside the clinical context.³ This can improve access to safe abortion by reducing demand on the health system and overcoming geographical or financial barriers to accessing health facilities. A review of 36 studies has shown that women were generally approving of the concept of self-management.³ They often reported some anxiety at the start but generally reported relief at the end and a strong sense of satisfaction with the choice to self-manage. Providers were also generally approving of the concept and believed it could be done feasibly, effectively and safely. Recent evidence has also shown that outpatient medical abortion can be safe and effective through 70 days gestation, consisting of a regimen of 200mg-mifepristone and a single dose of misoprostol.⁴ Although the evidence base has been on women up to 63 days gestation, a recent review has reported no increase in abortion-related serious adverse events (hospital admissions, transfusions) in medical abortions performed up to 70 days.

Follow-up after administration of medical abortion medications traditionally required a clinic review to ensure completion of abortion. A retrospective study in the United Kingdom of 943 women has shown that this can be replaced with a telephone call and a self-performed low-sensitivity pregnancy test (LSUP) at 2 weeks in screening for ongoing pregnancy with after early medical abortion with a sensitivity of 100% and specificity of 88%.⁵ The LSUP test was a double-cassette that gave a colour change when urine human chorionic gonadotropin (hCG) levels of 1000 IU or greater were present in the 1000-IU detecting cassette. A positive result at 2 weeks would indicate a possible ongoing pregnancy.⁶ A retrospective case review of patients in Brazil has also shown that home use of mifepristone and misoprostol provided through telemedicine is safe and effective, where women sought online consultation through a webpage and medications were

provided to them thereafter.⁷ The abortion process can also be made simpler with a systematic review showing evidence for safety of using last menstrual period to determine gestational age for first trimester medical abortion. This minimizes unnecessary interventions such as ultrasound scans and can increase acceptability to women undergoing abortion.⁸

A randomized trial of 2400 women in Moldova and Uzbekistan showed that phone follow-up with a semi quantitative urine pregnancy test and symptom checklist is a feasible and a highly effective approach in identifying ongoing pregnancy after medical abortion, and was comparable to clinic follow-up.⁹ Another study also showed that most women having an early medical abortion who go home to expel the pregnancy chose self-assessment, comprising of a self-performed low-sensitivity urine pregnancy test with instructions of signs and symptoms that mandate contacting the abortion services.¹⁰ This reduces the hassle of repeated clinic follow-ups without compromising patient safety.

There have been an increasing proportion of women in the United States and parts of Europe who are opting for medical abortion and keen to go home to expel the pregnancy. With increasing evidence on the safety and feasibility of this mode of abortion, it will likely be a viable option available to women up to 70 days gestation.

Surgical abortion

Surgical methods of abortion include vacuum aspiration performed usually in the first trimester and dilatation and evacuation which is performed in the second trimester where the intrauterine contents are too large to aspirate through the cannula. For the purposes of cervical ripening, oral or vaginal misoprostol are commonly used in the first trimester. In second trimester evacuation, dilatation of the cervix can be performed with the use of multiple osmotic dilators or prostaglandins.

A recent Cochrane review explored the use of nitric oxide donors in cervical ripening before first-trimester surgical abortion as they are known to induce cervical ripening without uterine contractions.¹¹ Nine studies were analysed and showed that nitric oxide donors are superior to placebo or no treatment but inferior to prostaglandins for first-trimester cervical ripening. They are also associated with more side effects such as headache, palpitations and giddiness. With respect to second trimester surgical abortion, a retrospective cohort study compared the effectiveness of at least 1 hour of 400mcg of buccal misoprostol to overnight osmotic dilators prior to dilatation and evacuation.¹² It was noted that there were no difference in procedure duration between both groups.

Known complications of surgical abortion include severe bleeding requiring transfusion, post-abortion infections, uterine perforation, cervical trauma, failure to end pregnancy and incomplete abortion requiring further intervention.¹³ A systematic review also suggests a link between termination of pregnancy and the formation of intra-uterine adhesions based on 2 prospective cohort studies.¹⁴ More research is required in this aspect. Another systematic review analyzing the risk of subsequent preterm birth after dilatation and curettage showed that it appears to be associated with an increased risk of subsequent preterm births.¹⁵ The increased risk is associated with repeat surgical abortions. However confounding may be present in view that these data are based on either cohort or case-control studies only. Hence, more research in the form of randomized controlled trials is necessary to further discern the association between surgical abortions and future fertility and reproductive outcomes.

Post-abortion care

Abortion care is vital in ensuring women do not suffer health repercussions from the abortion process and that the abortion process is complete. This encompasses antibiotics prophylaxis, screening for sexually transmitted infections, administration of anti-D immunoglobulin G as necessary and family planning advice. Post-abortion contraception plays an important role in preventing recurrent unwanted pregnancies and repeated abortions, hence reducing maternal mortality from unsafe abortions. Universal access to postabortion family planning services are endorsed by professional organisations as a standard of practice. In addition, the timing of contraception counselling is crucial as well. Offering all postabortion women family planning counselling and services before leaving the facility is important as fertility returns quickly within a few weeks. Studies have shown that women receiving immediate postabortion intrauterine devices and implants had fewer unintended pregnancies and repeat abortions than those who were offered delayed insertions.¹⁶ A systematic review and meta-analyses also showed that immediate administration of oral contraceptives postabortion may reduce vaginal bleeding time and amount, shorten the menstruation recovery period, increase endometrial thickness 2 to 3 weeks after abortion and reduce the risk of complications and unintended pregnancies.¹⁷

Recent evidence has also proven the efficacy of early induced medical abortion with mifepristone when beginning progestin-only contraception on the same day. A retrospective study of more than 2000 patients in Mexico compared success rate of medical abortion between patients who had started progestin-contraception immediately after mifepristone administration and those who had not started contraception. Medical abortion success did not vary between the two groups, proving the efficacy and feasibility of starting progestin-only contraception after mifepristone administration.¹⁸ In another retrospective study in South Africa of 87 women who received either etonogestrel implant or DMPA injection on the same day as mifepristone, the success rate of medical abortion was similar to that of the rate without progestin contraceptive administration.¹⁹

The type of contraception taken up is also important in affecting the likelihood of repeat abortion. In a recent Swedish cohort study, results show that choosing long-acting reversible contraception (LARC) at the time of index abortion was associated with fewer repeat abortions compared with choosing oral contraceptives. In addition, subdermal implant was as effective as intrauterine device in preventing repeat abortions beyond 3 years.²⁰ In the adolescent group, it has also been recommended that they should initiate a reliable contraceptive method particularly one that is not user-dependent, for prevention of repeat pregnancies. This should be initiated immediately after abortion as the motivation for choosing an efficacious method is highest at that time and resumption of ovulation occurs on average 3 weeks following induced abortion.²¹ Another large prospective cohort study of more than 9000 women in United States who received contraceptive counselling to increase awareness of all reversible methods available showed that LARC users reported greater continuation than non-LARC users at 12 months and 24 months. LARC methods were 20 times more effective than non-LARC methods as well.⁸ Hence improved access to LARC methods can result in fewer unintended pregnancies and abortions and considerable cost savings to the healthcare system. Results from a Cochrane review also showed that there was moderate quality evidence to show that insertion of an intrauterine device immediately after abortion is safe and practical. At 6 months post abortion, use of the intrauterine device is higher following immediate insertion as compared to delayed insertion.²²

Some focus should be placed on the psychological impact women have after going through the abortion process. Studies have shown that these women experience fear of social judgement, self-judgement and a need for secrecy due to stigmatizing attitudes in the public.²³ Almost 20% of women undergoing induced abortion are affected by related, long-term psychological complications such as anxiety disorders, depression and post-traumatic stress disorder.²⁴ It is important that comprehensive support interventions are available to prevent recurrent abortions and psychiatric problems post-abortion. These interventions should include women at high risk, bereavement support when experience of loss emerges and professional psychotherapeutic assistance in cases of complicated grief.

Conclusion

Abortion is a procedure that is performed commonly in the practice of gynaecology. However, the complications of the abortion process including psychological trauma on the patients should not be taken lightly. Active interventions should be taken to make the process more bearable for the patient such as facilitating expelling of the pregnancy tissue at home, reducing the need for clinic follow-up and providing psychological support to those at risk. Further research should also be performed to better delineate the link between surgical abortion and the effect on future reproductive outcomes. In the post-abortion period, immediate contraceptive counselling is ideal to prevent recurrent abortions and LARC has been shown to reduce the risk of unintended pregnancy as compared to other user-dependent methods.

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Conflicts of interest

None.

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