Chapter 8

Drug-Induced or "Medical" Abortion

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Since 1985, when the drug *RU-486* was introduced by the French pharmaceutical company, Roussel-Uclef, women have had an alternative to surgical abortion. RU-486 and other similar drugs expel the fetus from the uterus without women going to a hospital or clinic, but they must have several follow-up appointments with a doctor in case of complications. In general, *medical abortion* requires more clinic visits than surgical abortion, and is far from being the simple, quick procedure that is often portrayed in the media.

At present, there are no long-term, follow-up studies on the impact of drug-induced abortion, but what studies there are make it clear that this method is not free of failure, and there may be a number of unpleasant side effects such as nausea, diarrhea, vomiting, blood loss, prolonged hemorrhaging, high temperatures, and infections, especially during second-trimester abortions. In some cases, if the drug does not successfully expel the fetus from the womb, a surgical abortion is then performed. Pain is also an issue, with some women reporting more pain than with surgical abortion, but more studies into the actual impact of drug-induced abortions need to be carried out. As in other questions about the effects of abortion on women's health, many of these findings have been understated by North-American researchers.

Drug-Induced or "Medical" Abortion

With the introduction in 1985 of RU-486 (misopristone) by the French pharmaceutical company Roussel-Uclef, the use of drugs as a non-surgical alternative to first-trimester abortion became possible. Drug-induced abortion is referred to as "medical" abortion as opposed to "surgical" abortion, based on the traditional division of clinical units by medical or surgical designations. It is not to be confused with abortion performed for medical (maternal health) reasons.[1] Nor is it to be confused with the "morning-after pill", taken within 48 hours of unprotected intercourse.

With drug-induced abortion, the actual expulsion of the fetus occurs outside of a clinic or hospital. Although pronounced "safe and effective", the procedure is presently associated with a higher complication rate, including failure to abort, which subsequently necessitates a surgical abortion. It can also require anywhere from one to several days following the drug injection(s) to complete the fetal delivery.[2]

According to O'Connor, "Initial tests have shown that, when taken within the first seven weeks of pregnancy, RU-486 causes shedding of the fertilized embryo after implantation in the uterine wall 95 percent of the time." Her study also maintains that "The administration of a pill, or two drugs in combination, would allow more physicians to perform or facilitate abortions in their offices, because there would be no need for surgical intervention – thus making abortions available to many more women...."[3]

Two articles by Creinin, however, paint a less glowing picture.[4] There are frequent complications including "prolonged" vaginal bleeding lasting an average of 29 days.[5] A further disadvantage is the average delay of 24 days between treatment and the onset of vaginal bleeding. "...[T]his wait," Creinin dryly observes, "may be unacceptable to some women".[6] Finally, because the use of these chemicals requires several appointments with the administering doctor and numerous laboratory and radiological tests, the method has not become established as the simple alternative to surgery that the quotation by O'Connor suggests.

These problems are acknowledged in a review of the question that appeared recently in the *New England Journal of Medicine*. While endorsing the procedure, the authors of the review concede that "medical abortion is associated with higher rates of prolonged bleeding than in surgical abortion, and the rate of use of analgesic drugs is greater...Moreover, medical abortion has a lower rate of success than surgical abortion." In addition, "medical abortion requires more clinic visits than surgical abortion...and it should be offered only by well-trained clinicians who can provide surgical treatment in the event of a failed abortion or excessive bleeding. Women who choose medical abortion must have access to a specialized center where suction curettage is available, should heavy bleeding occur and blood transfusion be required."[7]

The controversy over the importation of misopristone into Canada and the United States has resulted in other drugs undergoing clinical trials as abortifacients, particularly prostaglandin analogues, such as misoprostol (cytotec) which were developed for use in medical conditions such as gastric ulcers, and methotrexate, a folic acid antagonist used to treat cancer, psoriasis and rheumatoid arthritis. Ferris and Basinski state that some physicians are "counselling women about [the] availability of [misoprostol] as off-label therapy for early termination of intrauterine pregnancy". Yet because of the significant failure rate of drug-induced abortion they declare this practice to be "insupportable".[8] The manufacturer of cytotec has also emphasized the inadvisability of its use in pregnancy.

To date there have been no long-term, follow-up studies of chemical abortion. Many of the studies that do exist are comparative, often analyzing two different drug regimes or patient satisfaction with drugs as they compare to surgery.[9]

Failed Drug-Induced or "Medical" Abortion

Drug-induced abortion often fails because the fetus is not fully expelled. Creinin and Vittinghoff studied two different methods of chemical induction and found that there was a 90 per cent effectiveness rate for one of their groups of

patients and a 47 per cent effectiveness rate for another group. In the end ten per cent and 53 per cent, respectively, underwent a surgical abortion in a hospital. As Table 8-1 indicates, this high failure rate remains a major concern of researchers.

Table 8-1
Failure rates in drug-induced or "medical" abortion studies[10]

study	*date*	*% failure*
Silvestre and colleagues	1990	4
U.K. Multicentre Trial	1990	6
Bugalho and colleagues	1993	8.3; 14
WHO (Van Look)	1993	4.5
Ferguson and colleagues*	1993	3
Henshaw	1994	5.8
Creinin and Vittinghoff	1994	10; 53 **
Hausknecht	1995	4
El-Refaey and colleagues	1995	3
Wiebe	1999(a)	7
Wiebe	1999(b)	17.2; 10.9**

* Second Trimester

** Failure percentage depends upon drug administered

Complications of Drug-Induced or "Medical" Abortion
The side effects reported in the above studies are also daunting: Ferguson and colleagues found that within their study of 62 women, 38 different symptoms were associated with drug-induced abortion. These symptoms included diarrhea, blood loss, high temperature, and infection. In fact, five women displayed delayed symptoms which did not appear until two weeks following the induction.[11]

Henshaw and colleagues note that there is a "higher rate of unpleasant sequelae during medical abortion...At 50-63 days gestation medical abortion becomes more unpleasant and its efficacy starts to wane...."[12] During the second trimester, according to Guidozzi and colleagues, medical abortion "means a nearly *fivefold increase* in the incidence of complications both major and minor."[13] These complications

are summed up by Grimes in his comprehensive review of the literature in the following way: "Disadvantages of medical abortion include the longer process, noxious gastrointestinal side effects, prolonged bleeding, occasional hemorrhage, higher failure rate, the inconvenience of several visits [to the doctor], and lack of immediate confirmation of success for some patients."[14]

In 1996 Ellen Wiebe studied 100 Canadian women who had undergone drug-induced abortions using misoprostol and methotrexate.[15] She found that these women reported 53 side effects, including nausea, diarrhea, fever, headaches, chills, and vomiting, but the number of individuals among whom the effects occurred was not given. Her study reported that eleven women underwent a surgical abortion following the failure of the drugs to complete the abortion.

Pain in Drug-Induced or "Medical" Abortion

Pain in surgical abortion (see Chapter 9) is reported to be as intense as the pain associated with non-terminal cancer and phantom limb pain.[16] Researchers inform us that "medical" abortion can also be painful. Women in Wiebe's study of abortion rated their level of pain. It is assumed that the McGill Pain Questionnaire was employed, since Wiebe was also involved in that study.[17]

Pain from drug-induced or "medical" abortions was rated at 5.8,[18] while pain from surgical abortions was only rated at 4.2.[19] These measures are based on a ten-point scale. Drug-induced abortion would seem to be more painful.

Creinin and Vittinghoff note in their study of different drugs for the induction of abortion that only nineteen per cent did not require pain medication, while "Pain was not as well tolerated by women in [the other group using different drugs]." Of the 60 per cent in this second group who required medication, 27 per cent needed narcotics and ten per cent required very high dose narcotics.[20] Henshaw and colleagues found that the unacceptability of "medical" abortion was correlated with the degree of pain that the woman experienced: " ...the more painful the medical abortion, the less acceptable the procedure."[21]

Psychological Aspects of Drug-Induced or "Medical" Abortion

Twenty per cent of the women in Henshaw's 1993 study reported that they wished to be assigned to the drug-induced abortion group rather than the surgery group because they viewed the procedure as "less invasive" and more "natural." Similarly, some women in Wiebe's 1996 Canadian sample reported that they were satisfied with the procedure because it "felt more natural" than surgical abortion.

However, induced abortion is not a natural event; nor is it without risk of complications. Further research may be needed to provide an answer to one question that this perception raises: If drug-induced or "medical" abortion is perceived as more "natural" by some, is there a risk that the possibility of pregnancy will be overlooked?

Conclusion

No long-term or epidemiological follow up has been carried out on women who have drug-induced or "medical" abortions; however, taking a drug to induce an abortion is not a simple, risk-free alternative to the surgical procedure. Despite Grimes' statement that "Medical abortion with mifepristone or methotrexate in combination with a prostaglandin is safe and effective", he admits that "…the risk of hemorrhage and gastrointestinal side effects is greater with medical abortion [than with surgical abortion]."[22] In one study, women reported up to 53 unpleasant side effects including diarrhea, vomiting, blood loss, hemorrhage, high temperatures, and infection. In addition to these medical complications, frequent visits to the doctor and to medical laboratories for tests are required with no guarantee that the abortion will be successful. In some instances, a surgical abortion is required to expel the fetus fully. As we have pointed out in Chapter 1 and in Chapter 17, "Methodology and Bias", these outcomes are often understated in North-American studies.

Key Points Chapter 8

- With the introduction of RU-486 and other similar drugs women can now avoid surgical abortion to terminate a pregnancy.

- There are no long-term, follow-up studies of the consequences of drug-induced or "medical" abortion.

- Studies show that some women choose drug-induced abortion because they consider it "more natural."

- Drugs, however, are not always effective in expelling the fetus. This can lead to a second, surgical, abortion.

- There are a number of unpleasant side effects, including nausea, various gastrointestinal discomforts, prolonged bleeding, and infections sometimes leading to subsequent surgical abortion.

- Pain is an issue for many women and needs further study.

- Many of these unpleasant sequelae are understated in the North-American literature on abortion, leading to the question: Are women in Canada and the United States being fully informed of the medical risks of the procedure?

Notes

1 O'Connor K. *No Neutral Ground? Abortion Politics in an Age of Absolutes*. Boulder, Colorado: Westview, 1996.

2 Grimes D. Medical abortion in early pregnancy: A review of the evidence [Review]. Obstetrics & Gynecology 1997 May;89(5 Pt 1):790-6.

3 O'Connor 1996. See n. 1; p. 174, p. 178.

4 Creinin MD, Darney PD. Methotrexate and misoprostol for early abortion. Contraception 1993(a) October;48(4):339-48.
Creinin MD. Methotrexate for abortion at <42 days. Contraception 1993(b) December;48(6):519-25.

5 Creinin 1993(a). See n.4, p. 346.

6 Creinin 1993(b). See n. 4, p. 523.

7 Christin-Maitre S, Bouchard P, Spitz IM. Medical termination of pregnancy. New England Journal of Medicine 2000 March 30;342(13):946-956, p. 954.

8 Ferris LE, Basinski AS. Medical abortion: what does the research tell us? Canadian Medical Association Journal 1996 January 15;154(2):185-7, p. 187.

9 Henshaw RC, Naji SA, Russell IT, Templeton AA. A comparison of medical abortion (using mifepristone and gemeprost) with surgical vacuum aspiration: Efficacy and early medical sequelae. Human Reproduction 1994 November;9(11):2167-72.

Creinin MD, Vittinghoff E. Methotrexate and misoprostol vs. misoprostol alone for early abortion: A randomised controlled trial. Journal of the American Medical Association 1994 October 19;272(15):1190-5.

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10 Table 8-1
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UK Multicentre Trial. The efficacy and tolerance of mifepristone and prostaglandin in first trimester termination of pregnancy. British Journal of Obstetrics and Gynaecology 1990 June;97(6): 480-6.

Bugalho A, Bique C, Almeida L, Bergstrom S. Pregnancy interruption by vaginal misoprostol. Gynecologic and Obstetric Investigation 1993;36(4): 226-9.

World Health Organisation Task Force on Post-ovulatory Methods of Fertility Regulation. Termination of pregnancy with reduced doses of mifepristone. British Medical Journal 1993 August 28;307(6903):532-7.

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Henshaw RC, Naji SA, Russell IT, Templeton AA. Comparison of medical abortion with surgical vacuum aspiration: Women’s preferences and acceptability of treatment. British Medical Journal 1993 September 18;307(6906):714-7.

Creinin MD and Vittinghoff E. 1994. See n. 9.

Hausknecht 1995. See n. 9.

el-Refaey H and Templeton A. Induction of abortion in the second trimester by a combination of misoprostol and mifepristone: A randomized comparison between two misoprostol regimens. Human Reproduction 1995 February;10(2):475-8.

Wiebe ER. Comparing abortion induced with methotrexate and misoprostol to methotrexate alone. Contraception 1999 January;59(1):7-10.

_____. Oral methotrexate compared with injected methotrexate when used with misoprostol for abortion. American Journal of Obstetrics and Gynecology 1999 July;181(1):149-52.

11 Ferguson et al. 1993. See n. 10.

12 Henshaw 1994. See n. 10.

13 Guidozzi F, van der Griendt M, Israelstam D. Major complications associated with extra-amniotic prostaglandin F2 alpha termination of the mid-trimester pregnancy. South African Medical Journal 1992 August;82(2):102-4.

14 Grimes 1997. See n. 2, p. 795.

15 Wiebe ER. Abortion induced with methotrexate and misoprostol. Canadian Medical Association Journal 1996 January 15;154(2):165-70.

16 Belanger E, Melzack R, Lauzon P. Pain of the first trimester abortion: A study of psychosocial and medical predictors. Pain 1989 March;36(3):339-50.

17 Wiebe ER, Rawling M. Jannssen P. Comparison of 0.5% and 1.0% lidocaine for abortions. International Journal of Gynaecology and Obstetrics 1996 October;55(1):71-2.

18 Wiebe 1996. See n. 15.

19 Wiebe et al. 1996. See n. 17.

20 Creinin and Vittinghoff 1994. See n. 9, p. 1193.

21 Henshaw et al. 1994. See n. 10

22 Grimes 1997. See n. 2.