Medical Abortion in Primary Care: Pitfalls and Benefits

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ABSTRACTS

We describe five pitfalls of medical abortion: ectopic pregnancy not terminated after misoprostol, but without negative side-effects; long-term vaginal blood loss with suspicious retained products which disappeared spontaneously; a patient with uterus myomatatosus with severe pain and retained products in the uterus; repetition of misoprostol because of retained products in the uterus after two weeks and an allergic reaction to methotrexate.

Despite these pitfalls, there are enough benefits to consider medical abortion with methotrexate and misoprostol as a safe method with a high success rate of more than 91% and a good alternative for surgical abortion. An invasive procedure is not necessary, there are no long-term complications and it can be performed at an earlier stage, which makes it more acceptable in society.

In Curaçao, where abortion is legally restricted, medical abortion is performed with methotrexate and misoprostol. In countries where abortion is legal, mifepristone and misoprostol are the first choice.

Aborto Medico en la Atención Primaria: Riesgos y Beneficios

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RESUMEN

Describimos cinco riesgos del aborto medico: el embrazo ectópico no terminado después de misoprostol, pero sin efectos secundarios negativos; la pérdida de sangre vaginal a largo plazo sin productos retenidos sospechosos que desaparecieron espontáneamente; una paciente con útero miomatoso con dolor severo y productos retenidos en el útero; repetición del misoprostol debido a productos retenidos en el útero después de dos semanas y una reacción alérgica al metotrexato. A pesar de estas dificultades, hay suficientes beneficios para considerar el aborto médico con metotrexato y misoprostol como un método seguro con una alta tasa de éxito superior al 91%, y como una buena alternativa al aborto quirúrgico. No se requiere un procedimiento invasivo, no hay complicaciones a largo plazo, y puede realizarse en una etapa más temprana, lo que resulta más aceptable para la sociedad. En Curazao, donde el aborto está legalmente restringido, el aborto médico se realiza con metotrexato y misoprostol. En países donde el aborto es legal, la mefepristona y el misoprostol son la primera elección.

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INTRODUCTION

Since the Food and Drug Administration (FDA) approval of mifepristone together with misoprostol for ending pregnancies in September 2000, medical abortion has become a good alternative for surgical abortion though it is not accepted by all abortion providers and physicians (1). In Curaçao, a small island in the Caribbean and part of the Netherland Antilles, abortion is prohibited by law but unofficially condoned, in contrast with the Netherlands where there is legal access to abortion. We have performed and registered medical abortions for five years using methotrexate and misoprostol as alternative for mifepristone and misoprostol because importing mifepristone, which is first choice in medical abortion, is not possible in Curaçao (2). Medical abortion is a method which can be performed well in primary care. One of the advantages of this is that a patient does not have to be referred to an institution unknown to her. Medical abortion in the first trimester of pregnancy has a high success rate, more than 97% with mifepristone and misoprostol, and more than 91% with methotrexate and misoprostol, with relatively few complications. In this paper, we want to demonstrate some pitfalls and benefits illustrated with several cases (3).

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PRESENTATION OF CASES

Patient A, a 32-year old native woman from Curaçao presented to our clinic with an unwanted pregnancy. A pregnancy test was positive and on bimanual pelvic examination there was a uterine size consistent with six weeks gestation. An ultrasound was not performed. Four 200 µg misoprostol tablets were inserted vaginally and after about one hour the patient felt cramps in her lower abdomen which she described as 'rather painful', followed by vaginal bleeding 10 hours later. *Patient A* described the bleeding as 'heavy' and it lasted for several days. Nevertheless, two weeks later, the urine test was still positive for pregnancy but an abdominal ultrasound done somewhere else showed no amniotic sac, so it was decided to test her urine for pregnancy after another week. When this tested positive again, the serum ß-hCG was determined and noted to be 9260 IU/L. A ß-hCG of more than 2000 IU/L without an amniotic sac *in utero* is an indication for an extra-uterine pregnancy (4). This was confirmed by a vaginal ultrasound performed by a gynaecologist. The patient was operated on the same day and two days later she left the hospital in good condition.

Evaluation: Misoprostol did not terminate an extra-uterine pregnancy, which at first was not diagnosed by physical examination and ultrasound. There were no negative side-effects either.

Patient B, a 34-year old native woman from Curaçao, gravida 4 para 2, was referred by a general practitioner because of an unwanted pregnancy of six weeks gestation. An abdominal ultrasound showed a pregnancy of seven weeks and one day. On the first day, 50 mg methotrexate was administered intramuscularly and four days later four 200 µg misoprostol tablets were inserted *per* vagina. At follow-up two days later, the patient mentioned vaginal bleeding with loss of blood clots. An abdominal ultrasound showed an empty uterus. The bleeding persisted however, and twenty days later the urine test was still positive for pregnancy as it did another four days later. An abdominal ultrasound showed a little gray area of about 9 mm in the uterus, suspected to be some retained products. The serum ß-hCG, however, was at 110 IU/L and one week later at 11 IU/L, so a conservative course of action was agreed upon. After twenty-eight days the bleeding finally ended and three weeks later the patient had a normal menstruation.

Evaluation: Suspected retained products which spontaneously disappeared and positive urine tests for pregnancy accompanied by low ß-hCG values. Occasionally, it takes a long time before the urine test for pregnancy is negative, as well as for vaginal bleeding to end. This is not an abnormal phenomenon in itself.

Patient C, a 40-year old woman from Haïti, gravida 6, para 4, with an induced surgical abortion in the medical history, came to the practice because of a delay of her period. An abdominal ultrasound showed a pregnancy of six weeks and five days gestation. Because the pregnancy was unwanted, four 200 µg misoprostol tablets were vaginally inserted, after which the patient felt a little pain in the lower abdomen and experienced a little bleeding with a few clots. Two days later, an abdominal ultrasound showed retained products and again four 200 µg misoprostol tablets were vaginally inserted, after which the patient experienced more bleeding but also increasing lower abdominal pain. Physical examination showed a woman suffering severely with a tender abdomen, without guarding. The pain lessened somewhat after 100 mg indomethacin rectally. She was sent to the hospital and the vaginal ultrasound performed by a gynaecologist showed several uterine myomata and retained products. The patient was curetted and left the hospital the same day in good condition.

Evaluation: unwanted pregnancy with a failed reaction to misoprostol accompanied by heavy pain because of uterine myomata or as a result of an incomplete abortion.

Patient D, a 32-year old woman from Colombia without a valid residence permit, had inserted eight days before the first examination, two 200 µg misoprostol tablets vagially and taken two orally, because of a unwanted pregnancy of five weeks gestation. After this, she noticed slight vaginal bleeding without clots. The first abdominal ultrasound showed a pregnancy of six weeks and five days. Fifty milligrams of methotrexate was administered intramuscularly and four days later, four 200 µg misoprostol tablets were inserted vaginally. At follow-up two days later, she mentioned a little vaginal bleeding with a few clots. An abdominal ultrasound showed an unclear image of the uterus. One day later she experienced painful cramps in her lower abdomen and more bleeding with clots. However, the pregnancy test two weeks after insertion of the misoprostol was positive and an abdominal ultrasound showed retained products. At the request of the patient, she was administered three more misoprostol tablets orally, after which the patient lost more clots and the pregnancy test was negative two weeks later.

Evaluation: retained products are ejected after a repetition of misoprostol two weeks later.

Patient E, a 20-year old gravida 1 para 0, with an unwanted pregnancy of five weeks gestation, requested a medical abortion. The pregnancy test was positive and the abdominal ultrasound did not yet show an amniotic sac. After administration of 50 mg methotrexate intramuscularly, she developed squamous erythema of both her hands within a day. These side effects disappeared spontaneously after a few days and after misoprostol tablets were inserted vaginally on the fifth day, the patient aborted without further complications.

Evaluation: Allergic reaction to methotrexate

DISCUSSION

From the cases described above it may be concluded that in medical abortion, the anamnesis as well as the ultrasound cannot always be depended upon. *Patient A* experienced vaginal bleeding, which she described as "heavy". However, she probably did not lose any clots but decidual cast which

can be easily confused with embryonic tissue. The pregnancy test remained positive due to an extra-uterine pregnancy. If she had been treated with methotrexate and misoprostol, instead of solely with misoprostol, maybe there would have been expulsion of the conception products. Methotrexate, when administered systemically, is used in the treatment of extra-uterine pregnancies and has good results if the initial ß-hCG is less than 3000 IU/L (5). In fact, it is possible that she had tubal abortion which raises the question whether she should have been operated upon. A tubal abortion can be disposed of by the body itself. There was no active loss of blood in the abdomen and the patient had no complaints, so a conservative course of action combined with ß-hCG tests could have been applied until spontaneous resorption would have taken place. The bleeding can be prolonged as a consequence of retained products, but also when progress is normal, bleeding can last for several weeks up to a month which can lead to insecurity for the patient.

Patient B experienced long-lasting vaginal bleeding; the ultrasound showed no retained products at first, but after 20 days there was a little gray area of about 9 mm in the uterus, suspected to be retained products. Eventually the bleeding ceased without further action.

Myomatas can cause a lot of pain after administering misoprostol. Misoprostol has uterotone and cervical ripening effects. The flow of blood in the myomata is decreased causing pain ischaemic. In the case of *patient C* it was not clear whether the pain was caused by the myomata or by an incomplete abortion. Analgesics such as ibuprofen and acetaminophen, were given for pain relief. The literature does not indicate a negative influence of ibuprofen or acetaminophen on medical abortion (6). When a medical abortion did not succeed, we decided to adopt a reticent course of action or perform a surgical abortion depending on the patient's wishes.

Patient D requested a repeat treatment with misoprostol after two weeks. There was no direct proof that she would benefit from this but the experiences of the patient made it difficult to deny her request.

Side effects of methotrexate rarely occurred. The most mentioned side effect was nausea. There was one patient with an allergic reaction to methotrexate: squamous erythema of the hands which disappeared spontaneously after a few days.

The schedule followed in these cases was that by Goldberg *et al* (3). In their article, some methods for medical abortion were compared. With 200 mg mifepristone taken orally and 800 µg misoprostol inserted vaginally 48 hours later, the highest success rates were obtained (97–98%) with pregnancies of up to nine weeks. When the 200 mg mifepristone taken orally was followed by 800 µg misoprostol taken orally instead of vaginally 48 hours later, the success rates with pregnancies of up to nine weeks were between 89 and 93%. In research where 50 mg/m² methotrexate was taken orally or intramuscularly, followed by 800 µg misoprostol inserted vaginally five to seven days later, success rates of 88–98% with pregnancies of up to eight weeks were recorded. Research of medical abortion of up to nine weeks with only 800 µg misoprostol vaginally showed success rates between 65 and 96%. When the misoprostol was administered every 48 hours for three times, success rates of 96% were recorded. In all cases, it showed that the chance for success with medical abortion was higher when the pregnancy was of shorter duration. Because it is not possible to import mifepristone into Curaçao, we opted for treatment with methotrexate and misoprostol. Methotrexate is a folic acid antagonist which prevents the reduction of dihydrofolic acid to tetrahydrofolic acid, which is an essential step in the synthesis of nucleic acids and cell proliferation. Methotrexate destabilizes the pregnancy and misoprostol gives expulsion of the products of conception.

Although pregnancy termination by means of surgical abortion can be performed in a safe way in developed countries, there is still a chance of complications like perforation or infection. The mortality risk for a woman who undergoes a surgical abortion in a developed country is 0.7 per 100 000 children born alive and this risk increases exponentially by 38% for each additional week of gestation (7). Medical abortion has the disadvantage that there is a small risk of failure, which would make it necessary to perform a surgical abortion after all and that the whole procedure can take a long time. The patient should be well-informed about this before starting the procedure. On the other hand, no invasive surgery is necessary and there will be no complications like low birthweight or premature deliveries in subsequent pregnancies or adhesions with resulting fertility problems (8, 9). Also, it is important that a woman has a choice and that she has the option of medical abortion when she wants to avoid an invasive procedure.

Medical abortion can be done at an earlier stage compared to surgical abortion. This is an important argument in the Dutch situation where 50% of the women treated had a gestational age of less than seven weeks. A surgical abortion preferably is performed with pregnancies of more than seven weeks because of the risk of not removing the amniotic sac in pregnancies less than seven weeks while medical abortion is preferred in pregnancies less than seven weeks (10). The earlier a pregnancy is terminated the less the risk of complications and the societal acceptance of an early termination of pregnancy is more favourable. *(http://www.polling report com/abortion.htm)*

In our office, all pregnancy terminations are for social indications. Usually one consultation will suffice to make it clear that a woman wants it and whether it is her own decision to terminate the pregnancy. When it is suspected that the patient has doubts, she is asked to return at a later date. In Latin America and the Caribbean, the number of unsafe abortions is high compared to the rest of the world reference. The mortality risk for a woman who undergoes a surgical abortion in a country where abortions are illegal, is 34 *per*

100 000 children born alive. Liberalization of abortion legislature will decrease the mortality rate of women who die as a result of unsafe abortions. In countries where pregnancy ter-mination was legalized, like Barbados, Canada and South Africa, there was no increase in pregnancy termination. The Netherlands, which offers extensive education about birth control and unlimited availability of contraception, as well as easy access to termination of pregnancy in a hospital or recognized institution, has one of the lowest abortion rates in the world (11).

Pregnancy termination has been performed throughout the centuries and will continue to exist in the future, in spite of laws, religions and social values which prohibit it (12). Women who want to terminate a pregnancy must have the possibility of having one in a safe and legal way, although it must be realized that pregnancy termination has to be regarded as an emergency measure and that much effort must be put into education and making available the right contraceptives on an individual basis. In Curaçao, where the socio-economic differences are huge and the largest health-insurance company does not refund the costs of birth control or sterilization, there is no access to reliable contraception for women, especially for the poor.

CONCLUSION

The advantages of medical abortion compared to surgical abortion severely outweigh the disadvantages, especially in countries where abortions are not legalized. The risk of complication is very low, a fact which should not lead to complacency during the treatment, especially in light of the cases described above. In countries where abortion is legal, it is a good alternative for surgical abortion and should be promoted as another option in abortion clinics. It should be contemplated as well to perform medical abortion in the general practice using mifepristone and misoprostol. The ß-hCG can be used to evaluate the result (13). Mifepristone and misoprostol have a higher success rate than the combination of methotrexate and misoprostol used by us and result in a faster expulsion of the fetus. Using ß-hCG can circumnavigate the sometimes unclear ultrasound results.

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