

PhD Thesis

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Abstract

Background. Medical abortion is a secure way of terminating a pregnancy. Since 1998, medical abortion with mifepristone and misoprostol has been available in Norway. During the last 16 years, the accessibility and use have increased and the treatment protocols have both been simplified and designed for different stages of gestation.

Main objectives. In this project we aimed to describe the implementation process of medical abortion and different treatment protocols in Norway during the period 1998 to 2013. Another goal was to evaluate the possible effects of the introduction on availability of abortion, access to it, and characteristics of women requesting abortion (Paper I). We introduced two treatment protocols, for home administration of misoprostol (Paper II) and late first trimester abortions (Paper III), respectively and wanted to evaluate the extent to which they were efficient and acceptable.

Materials and methods. Information on abortion procedures and year of implementation was obtained through questionnaires sent to all Departments of Obstetrics and Gynaecology in Norway in 2008 and 2012 (Paper I). To portray traits of women undergoing abortion, data from 223,692 women recorded in the Norwegian Abortion Registry who requested an abortion between 1998 and 2013 were analysed. Women undergoing medical abortion were compared to women performing surgical abortion based on characteristics of the study population (Paper I). In an observational prospective study, the implementation of home administration of misoprostol was evaluated in a cohort of 1,018 women (Paper II). Women received 200 mg mifepristone in hospital and self-administered 800 mcg misoprostol vaginally. The main outcome measures were success rate, evacuation rate, pain, bleeding, acceptability and the influence of travel distance (Paper II). A protocol for late first trimester abortions was implemented and evaluated through an observational prospective study with a cohort of 254 women. Women with a gestational age of 63–90 days were included. They received 200 mg mifepristone and were admitted as day patients in hospital after 36–48 hours, where they self-administered misoprostol

vaginally. Every 3 hours, 400 mcg misoprostol was given orally until termination, with a maximum of 5 doses. The main outcome measures were evacuation rate, induction-to-abortion interval, pain, bleeding, number of misoprostol administrations needed and acceptability (Paper III).

Results. Norwegian hospitals have rapidly introduced new treatment protocols. The use of medical abortion increased from 5.9% to 82.1% between 1998 and 2013, and by 2010, all Departments of Obstetrics and Gynaecology in Norway offered medical abortion. Waiting time from registered requests until termination was reduced from 11.3 days in 1998 to 7.3 days in 2013. More women underwent an abortion at 4–6 weeks gestation when performing a medical termination (41.6%), compared to surgical abortion (16.7%). Compared to women with no previous abortion women with repeated abortions had a lower tendency to opt for medical abortion. (Paper I). Home administration of misoprostol was found to be an effective and acceptable method for abortion up to 63 days of gestation. Travel distance did not influence the treatment outcome variables (Paper II). The percentage of hospitals offering home administration increased from 23.7% in 2008 to 92.1% in 2012. (Paper I). Medical abortion was shown to be an effective method for termination of pregnancy in late first trimester, and it was found to be acceptable to Norwegian women (Paper III). We found an increased prevalence of hospitals offering this method from 23.7% in 2008 to 84.4% in 2012 (Paper I).

Conclusions. Norway has experienced an almost complete change in abortion treatment from surgical to predominantly medical between 1998 and 2013. Women access abortion at an earlier gestational age with the medical method compared to surgical, and waiting time between request and termination has been reduced by 35% (Paper I). Knowledge and experience received through the implementations of both late first trimester abortions and home use of misoprostol in early first trimester, unrestricted by travel distance (Papers II and III), have resulted in the availability of expanded treatment portfolios in most hospitals.

List of publications

- I. Løkeland, M., Bjørge, T., Iversen, O.E., Akerkar, R., Bjørge, L.: Implementing medical abortion with mifepristone and misoprostol in Norway 1998–2013. Submitted.
- II. Løkeland, M., Iversen, O.E., Engeland, A., Økland, I., Bjørge, L.: Medical abortion with home administration of misoprostol up to 63 days gestation. *Acta Obstet Gynecol Scand.* 2014; 93:647–53.
- III. Løkeland, M., Iversen, O.E., Ertzeid, L., Nappen, M.H., Dahle, G., Bjørge, L.: Medical abortion at 63–90 days of gestation. *Obstet Gynecol.* 2010; 115:962–68.

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Reprint of Publication III was made with permission from Obstetrics & Gynecology, the American College of Obstetricians and Gynecologists and Wolters Kluwer Health Lippincott Williams & Wilkins.