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Title of thesis: "Medical versus surgical termination of pregnancy in first trimester"

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Opponents:

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Time and place of the defence:

September the 2nd 2005, Hvidovre Hospital, Copenhagen, Denmark.

Abstract:

This Ph.D. thesis is based on research performed at the department of Obstetrics and Gynaecology, H:S Hvidovre Hospital, in the period of 2000–2004 in cooperation with the Gynaecological/Obstetrical Clinic, H:S Frederiksberg Hospital.

In the end of the 1990's medical abortion was introduced in Denmark as an alternative to the traditional surgical abortion method. The aim of the thesis was to compare medical and surgical abortion on efficacy, complications, side effects, leave of absence and satisfaction. An additional aim was to analyse and improve the follow-up procedure after medical termination of pregnancy.

The study was designed as a partly randomised study including 1,135 women with gestational age ≤ 63 days having either a medical (mifepristone 600 mg day 1 + gemeprost 1 mg day 3, n=410) or a surgical abortion (n=725). The method of termination was decided either by randomisation (n=111) or by choice (n=1,024). The women were followed with a clinical visit after two weeks and with questionnaires after two and eight weeks. Readmissions within three months were registered from a national database. Prior to the comparative study, a prospective cohort study of 461 women having a medical abortion was performed to analyse and optimise the follow-up procedure after medical abortion, and to gain experience with the new procedure.

In the present study, the success rate after three months was higher after surgical than after medical abortion (97.7% vs. 94.1%), $p < 0.01$, and failures were identified after a longer median time following medical than surgical abortion; 22 (range 3-91) days and 5 (range 1-54) days respectively, $p < 0.05$. The success rate after medical abortion decreased with increasing gestational age ($p < 0.01$) while the success rate was insignificantly affected by gestational age after surgical abortion. After medical terminations the frequency of ongoing pregnancy was 0.5%, while no such cases were seen after surgical terminations. The risk of major complications was minimal after both procedures, but more women were treated with antibiotics (7.8% vs. 3.7%), $p < 0.05$ after a surgical than after a medical termination. Side effects as abdominal pain, nausea, vomiting, diarrhoea and dizziness were more frequently experienced as severe by women having a medical than a surgical abortion. More women were very satisfied or satisfied with a surgical than a medical procedure

(92% vs. 79%), $p < 0.0001$, and more women were very satisfied/satisfied after having chosen the medical method rather than being randomised to this method of termination (82% vs. 68%), $p < 0.05$. The lower level of satisfaction with the medical method was present in all gestational ages.

At the two-week follow-up, the endometrium measured by ultrasonography was wider and the absolute and the relative β -hCG values were higher among women who later turned out as failures than among successfully treated women. Neither of these parameters though, could predict late failure with a clinically acceptable positive predictive value.

In summary, safety, efficacy and acceptability were high, while major complications were rare after both the medical and the surgical abortion procedure. Pelvic inflammatory disease is associated with an increased risk of infertility and the majority of the abortion seeking women assumed that they wanted to become pregnant later in life. Therefore the higher incidence of presumed infection after a surgical than after a medical termination is essential in the comparison of the two methods. Future studies must reveal how many of the presumed infections reflect true pelvic inflammatory diseases with potential adverse effect on fertility. The future hopefully also holds an optimisation of the medical abortion procedure meaning fewer side effects without loss of efficacy, earlier diagnosing of failures, maybe home administration of misoprostol and more focus on the psychological counselling of the women – all of which would probably have a positive impact on satisfaction. It seems evident though, that the choice between the two procedures is important to maintain high levels of acceptability among the abortion seeking population.