

# MISCARRIAGE

## Incidence, management and future fertility

### Akademisk avhandling

Som för avläggande av medicine doktorsexamen kommer att offentligt försvaras i aulan,

Kvinnokliniken, Sahlgrenska Universitetssjukhuset/Östra, Göteborg

Fredagen den 9 juni 2006, kl. 13.00

av

**Febe Blohm**

Avhandlingen baseras på följande delarbeten:

**I. A prospective longitudinal population-based study of clinical miscarriage in an urban Swedish population**

Blohm F, Fridén B, Milsom I.

*In manuscript*

**II. Expectant management of first-trimester miscarriage in clinical practice**

Blohm F, Fridén B, Platz-Christensen J.J, Milsom , Nielsen S.

*Acta Obstet Gynecol Scand* 2003; 82:1-5.

**III. A randomized double blind trial comparing misoprostol or placebo in the management of early miscarriage**

Blohm F, Fridén B, Milsom I, Platz-Christensen J.J, Nielsen S.

*Br J Obstet Gynaecol* 2005; 112: 1090-1095.

**IV. Fertility after a randomised trial of spontaneous abortion managed by surgical evacuation or expectant treatment**

Blohm F, Hahlin M, Nielsen S, Milsom I.

*Lancet* 1997; 349:995.

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**MISCARRIAGE**  
**Incidence, management and future fertility**  
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Miscarriage is a common problem, often necessitating emergency health care, which has traditionally been managed with uterine curettage under general anaesthesia. Uterine curettage has been the most common surgical procedure performed by gynaecologists after office hours in industrialized countries, consuming substantial health care resources. There are, however, risks associated with this procedure and its use has been questioned as the treatment of choice for uncomplicated early miscarriage.

**Aims and methods:** To longitudinally assess the incidence of miscarriage and to assess risk factors for miscarriage in three birth cohorts of women (*Paper I*); and to evaluate and compare conservative management and surgical intervention and these methods' short- and long-term effects in one observational study (*Paper II*) and two randomized studies (*Papers III & IV*).

**Results:** (*Paper I*) Approximately 12% of all pregnancies ended in miscarriage in a group of women born 1962, monitored for 20 years. One woman in four suffered a miscarriage and 75% in this group had no more than one miscarriage. No risk factor for miscarriage could be reliably identified. (*Paper II*) In an observational study of patients presenting for incomplete early miscarriage 83% were found to resolve spontaneously within one week, requiring no further surgical or medical intervention. Expectant management entailed no increased risk of infection, pain, haemorrhage or extended sick leave, compared to surgical evacuation. (*Paper III*) After administration of a single vaginal dose of misoprostol miscarriage was complete without surgical intervention within a week in 81% and within four weeks in 88% of the subjects. Expectant management alone led to an evacuated uterus within a week in 52% and, if the woman awaited a spontaneous course of events for one month, in 60%. The disadvantage of pharmacological management was that the women suffered more pain and that more subjects required analgesics. (*Paper IV*) In a randomized study no differences in fertility between surgically and expectantly managed participants were found at a 2-year follow-up. There were no differences in infant birth weights or caesarean section rates between groups and the prematurity rate was not increased in either group.

**Conclusions:** Approximately 12% of all pregnancies ended in a miscarriage. Conservative management of uncomplicated first-trimester miscarriage, with or without supplementary pharmacological treatment, has been shown to be readily accepted by women and a safe and functional alternative to surgical curettage of the uterus.

**Key words:** expectant management, fertility, incidence, management, miscarriage, misoprostol, prevalence, risk factors, ultrasound.

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