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SHORT AND LONG TERM EFFECTS OF CAESAREAN SECTION AND VAGINAL DELIVERY

AKADEMISK AVHANDLING

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ABSTRACT

The aim of this thesis was to study short and long term effects after caesarean section (CS) and vaginal delivery. We also studied the difficulty in estimating blood loss at delivery and birth experience estimated nine months after delivery.

In **Study I** blood loss during delivery was measured in two ways, visually, according to the routine of the hospital, and with a laboratory method, the alkaline hematin method. The visual estimation tended to over-estimate the bleeding. In vaginal deliveries there was no correlation between the two ways of measuring. Using blood loss after delivery as a quality indicator or for comparison in studies may lead to false conclusions, since visual estimation has low validity.

In **Study II** the Swedish Hospital Discharge Registry was used to identify women with a diagnosis of pelvic organ prolapse. The data were linked to the Swedish Medical Birth Registry (MBR). 16,605 women who were diagnosed with pelvic organ prolapse (ICD9: n = 618, ICD10: n = N81) and who had deliveries during 1973-2004 were identified. Stratification was made by the women's year of birth (2 year intervals), the year of the last delivery (1 year interval), and the parity at the last delivery. Among women who had only had vaginal deliveries, a strong and almost linear association between parity and the risk of surgery/in hospital care of pelvic organ prolapse was found. Women delivered by CS only, had a five-fold lower risk of being admitted to hospital for pelvic organ prolapse.

In **Study III** healthy primiparae with planned CS were investigated in a prospective cohort study. The indication for planned CS was breech presentation or maternal request. For every woman scheduled for a planned CS, one to two women from the same antenatal clinic planning a vaginal birth were asked to participate. Questionnaires were answered at inclusion (gestational week 37-39), two days, three and nine months after delivery. Details about the delivery were retrieved from the medical records. The outcome of delivery and complications were investigated and data were analysed as intended mode of delivery. In this group of healthy Swedish primiparae collected prospectively, we could not show any difference in short term medical complications like blood loss and infections. There was a longer in hospital stay in the planned CS group

Study IV: The Karolinska Scales of Personality (KSP), the Edinburgh Postnatal Depression Scale (EPDS), Wijma Delivery Expectancy Questionnaire (W-DEQ A), and Wijma Delivery Experience Questionnaire (W-DEQ B) were added to the data in Study III. The experience of delivery was measured with a Visual Analogue Scale (VAS) in order to get a global rating of the delivery. The logistic regression analysis yielded odds ratios for those variables that were independently related to the experience of delivery. There was no correlation to planned mode of delivery. Confidence in the midwife as well as adequate pain relief seems to be more important than mode of delivery for a positive birth experience. W-DEQ B was correlated to VAS at nine months after delivery, and even though the correlation was moderate, VAS could be a simple method to estimate birth experience.

These studies on healthy Swedish primiparae show that improving outcome in planned vaginal deliveries by support and coping with pain are important issues, but also that risks with one planned CS are few.

Key words: Caesarean section, maternal request, post partum haemorrhage, comparative study, repeatability of results, CS/adverse effects, cohort study, obstetric complications, pelvic organ prolapse, birth experience