

## A RETROSPECTIVE STUDY OF PERINEAL TRAUMA FOLLOWING VAGINAL DELIVERY

### Hypothesis / aims of study

To identify risk factors and derive possible strategies for prevention of perineal trauma following vaginal delivery.

### Study design, materials and methods

We present data from 841 deliveries as part of our ongoing retrospective study of the delivery records from 22000 vaginal deliveries over a period of 4 years in a teaching hospital in the U.K.

Following characteristics will be collected and analysed from a birth register and a computerised labour ward information system:

Type of perineal tear, Birth weight, Age, Parity, induction of labour, epidural analgesia, episiotomy, type of vaginal delivery, instrument used for assisted vaginal delivery, shoulder dystocia, and type of staff attending delivery.

The main outcome measure is an obstetric anal sphincter laceration.

### Results

The results from our reviewed data from 841 deliveries show the incidence of 3<sup>rd</sup>+4<sup>th</sup> degree tear after normal vaginal delivery is 4.9% whereas the incidence of 3<sup>rd</sup>+4<sup>th</sup> degree tear after instrumental delivery is 12.2%. Instrumental delivery was responsible for 24% percent of anal sphincter injury whereas 76% occurred after normal vaginal delivery. 75% of anal sphincter injuries happened to primiparous women and 67% of anal sphincter injuries happened to women with birth weight over 3.5 KG.

### Interpretation of results

With decline of maternal and fetal mortality over the past century, increased attention has been focused on the morbidity of childbirth. Concerns about incontinence and perineal trauma after vaginal delivery drive patients to request elective caesarean section as mode of delivery. Existing evidence suggests that women who were delivered with an intact perineum reported the best outcomes with regard to incontinence and dyspareunia.

Incidence of anal sphincter lacerations is quoted to be around 2.2% to 19% in various published studies. In our population, approximately 5% of women experienced a third- or fourth-degree laceration at the time of vaginal delivery. The results from data are consistent with other studies with regards to established risk factors of perineal trauma. These are primiparity, prolonged second stage of labour, size of the baby, and instrumental delivery.

Instrumental vaginal deliveries have been identified as an independent risk factor for anal sphincter damage. Interestingly, in our study only 24% of the anal sphincter injury happened after instrumental delivery but the majority of 76 % occurred following normal vaginal deliveries. This could be due to an increasing trend towards 'hands off' technique used by midwives and a general reluctance to using episiotomies at normal vaginal delivery. The complete analysis of our data from years 2004-2007 involving 22000 deliveries will be presented shortly. We believe that the lower incidence of anal sphincter damage following instrumental delivery in our study is due to protecting the perineum and possibly more liberal use of medio-lateral episiotomy.

### Concluding message

Our study shows that most anal sphincter injuries occur after normal delivery. It remains to be seen if 'hands off' approach should be abandoned in favour of hands on to protect the perineum during normal vaginal delivery. The results of this study will have an increasing implication on modern midwifery practice.

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<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>No direct involvement of patients. Retrospective study.</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>No</b>
<b><i>This study did not follow the Declaration of Helsinki in the sense that</i></b>	<b>No direct involvement of patients. Retrospective study.</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>No</b>