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# PREGNANCY, CHILDBIRTH AND URINARY INCONTINENCE: CAESAREAN FOR ALL?

**Introduction** Childbirth is often quoted as a major factor in the development of urinary incontinence. Caesarean section (LSCS) is associated with a reduction in the incidence of urinary incontinence<sup>i</sup>. Several studies have shown that symptoms predominantly start in the antenatal period<sup>ii</sup> (AN) and that pregnancy may be important due to hormone induced change of the connective tissue<sup>iii</sup>. We studied women from the third trimester to six months postpartum.

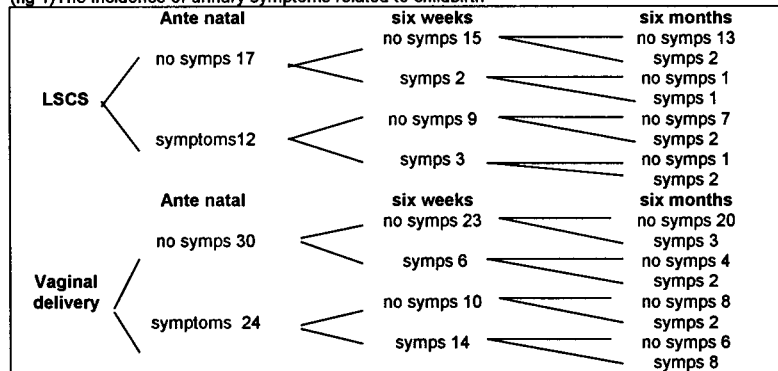
**Methods** Women were recruited from the antenatal clinic of a teaching hospital. All women entered the study at between 34 and 42 completed weeks of their first on going pregnancy and were assessed using a self administered symptom questionnaire. They were reviewed at six weeks and at six months postnatally to assess for incontinence. Cross sectional analysis was performed using a Binomial analysis. The data were reassessed comparing the women delivered by LSCS without labour (at 0 cm dilated) and for women delivered in the first half of labour (<5 cm dilation) with those delivered by LSCS at > 5 cm dilated.

**Results** 114 women were recruited. Complete data were available on 83 (73%). 36/83 (43%) complained of AN incontinence. 29/83(35%) women were delivered by LSCS. Data were available on the time of delivery on 20 of these women. Eight had elective and 12 had emergency LSCS. 15 of the operations were performed < 5cm dilated. These results were not significantly different with regards to delivery mode and the urinary symptoms. We were unable to demonstrate any difference between instrumental deliveries and normal vaginal deliveries. Of the women who were delivered vaginally overall 38/53(72%) and 22/29 (76%) of Caesarean section group had no symptoms at 6 months. Women who had AN symptoms stood a 4/12(25%) and 10/24 (42%) chance of continuing to be symptomatic for LSCS and vaginal delivery respectively. 60% of the women who have AN symptoms and 50% of the women who have symptoms at 6 weeks will be symptom free at six months after a vaginal delivery. 25% of the women with AN symptoms prior to a LSCS will continue to have symptoms at six months as will 60% of the women with symptoms at six weeks.

Data on the women with completed data the positive predictive value for antenatal leakage of 58/95 for six month symptoms (0.61) with a negative predictive value of 46/72 (0.64). The corresponding figures for vaginal delivery and urinary incontinence are 55/92 (0.60) for positive predictive value and 46/75 (0.61) for the negative predictive value.

**Conclusions** To our knowledge this is the second study to follow women longitudinally and look at how symptoms change with time. Our results show that stress incontinence was not uncommon after LSCS. One of the commonest reasons for LSCS is failure to progress which possibly reflects the woman's collagen rather than avoiding trauma at vaginal birth. Therefore the reduction in incontinence after LSCS may be reflect the women rather than the mode of delivery. AN symptoms however continue to trouble a substantial proportion of women after LSCS and this mode of delivery can not be justified as a preventative procedure against stress incontinence. Women with AN symptoms can be reassured that in the majority of cases these symptoms resolve in the long term and in view of this studies of incontinence after childbirth need to be long term to be representative of persistent rather than transient symptoms

(fig 1) The incidence of urinary symptoms related to childbirth



<sup>i</sup> Obstetric practice and the prevalence of urinary incontinence three months after delivery Br J Obstet Gynaecol 1996 103(2):154-61

<sup>ii</sup> Disturbances of bladder function in relation to pregnancy. J Obstet Gynecol Br Empire 1960; 67:353-366

<sup>iii</sup> The effect of the first pregnancy on the connective tissue of the rectus sheath. Neurorol & Urodyn 1997. 16(5):381-382

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### A PROSPECTIVE OBSERVATIONAL STUDY OF THE OUTCOME FOLLOWING DELAYED PRIMARY REPAIR OF OBSTETRIC GENITAL FISTULA AT A FISTULA HOSPITAL

**Introduction:** The Fistula Hospital in Ethiopia was established by Drs. Reginald and Catherine Hamlin in 1975. Over 15,000 obstetric fistula have been repaired since this unit opened (1,2). Obstetric genital fistula is still a major problem in the third world with 50,000-100,000 new cases each year. The most common risk factors include first delivery and prolonged labour (1,2). Despite the high anatomic success rates reported following delayed primary repair, persistent urinary and faecal incontinence remains a significant problem (3,4).

**Aims:** To evaluate: 1) epidemiological factors associated with the development of obstetric genitourinary fistula, 2) incidence of persistent postoperative urinary and faecal incontinence and 3) urodynamic findings following fistula repair.

**Methods:** Fifty nine consecutive women were recruited from the Fistula Hospital in Ethiopia, following delayed primary repair of obstetric genitourinary fistula. A detailed obstetric, faecal and urinary questionnaire was completed and the severity of incontinence symptoms graded using a validated scoring system. The case-notes for each patient were reviewed and preoperative details regarding the site, size and type of fistula, degree of bladder neck mobility and scarring of the vaginal wall was recorded. Postoperative clinical findings were also noted. All women with persistent urinary incontinence following fistula closure underwent urodynamic assessment. Urodynamic diagnosis was evaluated according to ICS criteria.

**Results:** The mean age was 24 years (range 16-52). 42(71%) followed first delivery and 17(29%) following subsequent delivery. The mean duration of labour was 4 days (range 1-9). 32(53%) presented for treatment within one year. Of the remaining 27 women 11(18%) presented within 12-24 months and 16(29%) more than two years following delivery. 45(76%) women had an isolated vesicovaginal fistula (VVF) and 14(24%) a