

OBSTETRIC PRACTICE AND URINARY INCONTINENCE 5–7 YEARS AFTER DELIVERY

Aims of Study

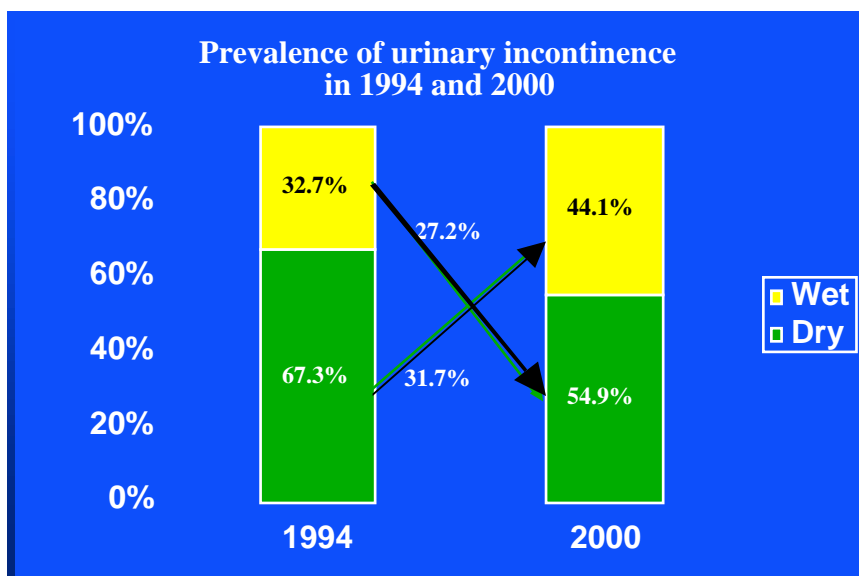
Childbearing is believed to be a significant risk factor for urinary incontinence (1). However, there is no consensus on reducing this risk and evidence is conflicting whether this condition can be prevented or alleviated by aspects of obstetric practice, in particular caesarean section (2 & 3). In 1993/4, questionnaires were sent out to 10,964 women three months after delivery. Identified risk factors for postpartum incontinence were, vaginal delivery, multiparity and obesity and, also, that caesarean section was partially protective at this time. At present there is little published information on either the natural history of postpartum incontinence, nor of the long-term relationship of obstetric factors with the prevalence of urinary incontinence. The present multi-centre study was therefore carried out to examine these issues 5–7 years after delivery.

Methods

The 7,882 women who returned the first questionnaire in 1993/4 from the three centres were sent another confidential questionnaire in 2000. Inquiry was made about the prevalence, type, frequency and effect on quality of life of urinary incontinence and other urinary symptoms. Information was collected on obstetric history since 1993/4 and also on performance of pelvic floor muscle exercises and sexual function (related to other studies (4)). A univariate analysis followed by a logistic regression was carried out examining the relationship of urinary incontinence with the obstetric and maternal variables (taken from the hospital notes/perinatal databases in 1993/4 and the second questionnaire).

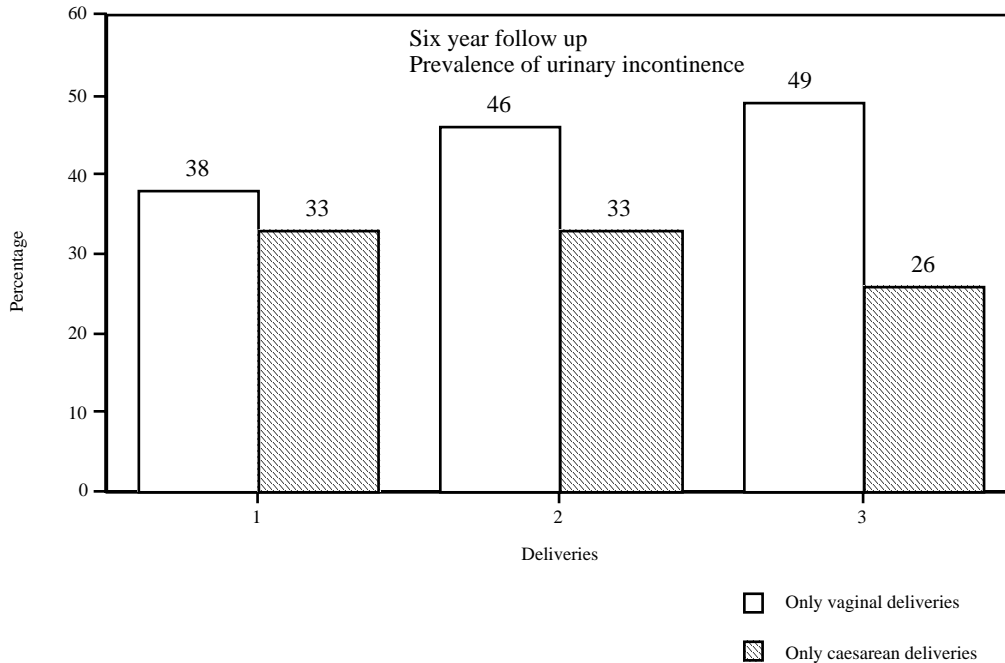
Results

Four thousand, two hundred and forty-two (53%) questionnaires were returned. At 5–7 years after delivery 44.6% of women admitted to some degree of incontinence, with 4.1% having daily or more frequent leakage; 12.9% of women needed to wear a pad for their incontinence either sometimes or daily and 18.8% felt that incontinence was either a hygienic or social problem. There was a significant remission and new onset rate of urinary incontinence over the six years of the study with just over 27% of the incontinent women in 1994 becoming dry in 2000, and 31.7% of the continent women in 1994 becoming incontinent in 2000. (Figure 1).



Onset of incontinence at initial pregnancy in 1993/4 was a powerful predictor of incontinence 5–7 years later with 84.4% of the women with onset of incontinence before pregnancy still being incontinent in 2000 compared with 31.8% of women who were dry pre-pregnancy in 1993/4. (odds ratio 11.7, 95%CI 8.6–15.9). Pre-pregnancy incontinence was a more powerful predictor than incontinence coming on either during pregnancy (66.1%, OR 4.1 95%CI 3.0–5.5) or postpartum (68.0%, OR 4.7 95%CI 3.4–6.4).

Regarding the relationship of obstetrical factors and incontinence six years after delivery, caesarean sections still provided some 'protection' but less so than at three months postpartum (any incontinence: only vaginal deliveries 46.1%, only caesarean sections 32.0% P = 0.0000). There was no difference between elective and emergency caesarean sections, but two and three caesars offered more protection than one caesar (which was not significantly different from a single vaginal delivery — Figure 2). There were no other significant obstetrical factors related to incontinence 5–7 years after delivery.



Conclusions

At six years postpartum, the prevalence of urinary incontinence is high (45%). Remission and new onset rates also appear high and confirm the need for further longitudinal studies and the use of 'controls' in any intervention studies in this period. Pre-pregnancy urinary incontinence appears to be a powerful predictor of incontinence six years after delivery. Caesarean section only offers partial protection (not after one caesar) and it is debatable whether this is sufficient to justify the surgical risks of two or more caesarean sections to result in an approximate 10-15% reduction in the prevalence of urinary incontinence.

References

- (1) *NZMJ*, 1988, pg 756-758
- (2) *BJOG*, 1996, 104, 154-161
- (3) *BJOG*, 2000, 107: 1460-1470
- (4) ICS abstract 2002.