THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF INDIA

The Journal of Obstetrics and Gynecology of India (November–December 2011) 61(6):635–637
DOI 10.1007/s13224-011-0095-7

ORIGINAL ARTICLE

Child Birth, Pregnancy and Pelvic Floor Dysfunction

T. V. Chitra · Panicker Seetha

Received: 25 September 2009 / Accepted: 4 August 2011 / Published online: 17 January 2012

Abstract
Introduction To determine the prevalence of incontinence and its relation to various factors like age, parity, mode of delivery and birth weight.
Methods After informed consent, a questionnaire was filled by a trained interviewer.
Results The prevalence of incontinence was 18.6%. Incontinence was reported in 12.5% of primis as compared to 26.4% in multis. The incidence of incontinence rose as age advanced. Sixteen percent developed incontinence following LSCS whenever 19.8% developed incontinence after normal delivery.
Conclusion Pelvic floor dysfunction occurs commonly following childbirth, with increasing parity urinary incontinence particularly stress incontinence was more common. No significant reduction in incidence of incontinence following LSCS was noted in this study.

Keywords Anal incontinence post delivery · Urinary incontinence post delivery

T. V. Chitra (✉), Professor · Panicker S., Professor and HOD
Department of Obstetrics & Gynecology, P.S.G. Institute of Medical Sciences & Research, Peelamedu, Coimbatore 641 004, Tamil Nadu, India
e-mail: chitrabhat60@yahoo.co.uk

Introduction

Pregnancy, Child Birth and Incontinence

Pregnancy and child birth have long been considered as risk factors in the genesis of pelvic floor dysfunction. The mechanical strain during delivery may give rise to partial denervation of the pelvic floor and injury to the muscle and connective tissue.

Parity, instrumental delivery, prolonged labor and increased birth weight have always been considered predisposing factors for pelvic floor injury [1]. However clear data regarding protective effect of LSCS are inconsistent in patients presenting with incontinence. Very few Indian women seek treatment in spite of suffering from incontinence. There are few studies to state the prevalence of this condition in the Indian context. With this in mind a study was conducted to determine the prevalence of incontinence in women in our centre.

Material and Methods

Women in the reproductive age group between 20 and 35 attending the Gynec and postnatal OPD were giving the option of answering a questionnaire. Women who consented were interviewed with a standard set of questions regarding age, parity, mode of delivery, weight of baby, incontinence if any and type of incontinence. Data were collected by a trained interviewer and was analyzed.

A comparative analysis was done between continent and incontinent women.

Results

Incidence

There were a total of 359 respondents. Eighty-one had incontinence, in 14 it was transient, only 67 of them admitted that they suffered from incontinence at present, either urinary or anal giving the incidence of 18.6%. The remaining 292 did not have any evidence of incontinence.

Age

There was an increased incidence as age advanced. Fourteen patients were less than 25 years, 22 patients were between 26 and 30 years and 31 patients were beyond 30 years, showing a linear association with age (Fig. 1).

Parity

Of the 67 women with incontinence 25 were primipara and 42 were multipara. Amongst the continent women 175 were primipara and 117 were multipara. Using a χ^2 test this was found to be statistically significant with a P value of <0.0007.

Mode of Delivery

Mode of delivery was as follows in continent and incontinent women (Table 1).

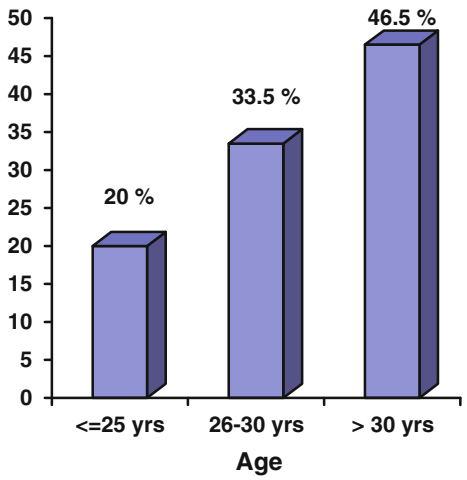

Fig. 1 Association of age with incontinence

Table 1 Mode of delivery

Mode of delivery	Incontinent women	Continent women
LSCS	18	94
Instrumental delivery	6	22
Normal delivery	43	176

Instrumental Delivery

Six patients had an instrumental delivery, five by vacuum and one by forceps. Seventy-three percent of incontinence women had a vaginal delivery including forceps, whereas amongst the continent women 67% had a vaginal delivery. When compared with normal delivery P value was found to be 0.39 which was not significant.

The Type of Incontinence

Incontinence was found in 67 women, Urinary incontinence was found in 60 women, five had anal incontinence and two had both urinary and anal incontinence. Occult sphincter defects are common after vaginal delivery especially forceps delivery [2].

Urinary incontinence was predominantly SUI in 54 women, Urge incontinence in three and mixed in three.

Anal incontinence was for flatus in three, liquid stools one, and solid stools one.

Birth Weight

When birth weight was analyzed it was shown that 56.7% had a birth weight >3 kg, while amongst the continent women 54.4% had a similar birth weight. Using a χ^2 test this was found not be significant giving a P value of 0.511.

Discussion

The number of women with incontinence were 81. 14 patients had incontinence antenatally which disappeared after delivery and hence were not included in the study. It is well known that urinary incontinence is very common during pregnancy. But the majority of these subjects will have resolution of their incontinence. Only 67 patients were currently incontinent and the incidence of incontinence was 18.6%. This is similar to most studies [1].

Multiparity was associated with increased incidence of incontinence with a P value of 0.0007 which was found to be statistically significant. The association between parity and urinary incontinence was analysed in an unselected sample of 27,900 women. Urinary incontinence was reported by 25% of participants. Parity was associated with stress and

mixed type of incontinence. The first delivery being the most significant. With relative risk of 2.2 and 3.3 for primipara and multipara respectively (EPINCOT study) [3].

Age plays a very significant role in the development of incontinence. The relationship is linear. Our study also shows a similar increase (EPINCOT study) [3].

The literature on the relationship between mode of delivery and subsequent development of incontinence is mixed. Several recent large epidemiologic studies addressed the question of mode of delivery and subsequent urinary incontinence. Two studies found that women who delivered by LSCS had a similar risk of urinary incontinence as women with any vaginal delivery [1, 4].

Some studies have shown that LSCS has been protective to the pelvic floor. Before we can state with any degree of accuracy, a long term RCT trial must be carried out to establish this connection. In this study the number of women who developed incontinence after cesarean section was less when compared to those who delivered vaginally, but was not statistically significant. Whether the cesarean was elective or emergency was also not known.

Another area of concern was the use of instrumental delivery. When compared to normal vaginal delivery or vacuum assisted delivery, forceps delivery increased the risk of incontinence by 5%. In this analysis the mode of assisted delivery was mostly by vacuum and no significant correlation could be obtained.

The prevalence of anal incontinences is 2–24% inclusive of flatus and stool and the prevalence of fecal incontinence is 0.4–18% [2].

Conclusion

This study showed that incontinence was common following delivery. As age advances the percentage of women suffering from incontinence also increased. Incontinence was more common in multipara when compared to primipara. Incontinence was not uncommon following LSCS. However following instrumental delivery there was no significant difference. This study also did not show any correlation as far as birth weight and mode of delivery was concerned.

The prevalence of incontinence women, the type and risk factors seemed to be comparable to other studies.

Acknowledgment We thanks Ms. Mahalakshmi, Associate Professor of Physiotherapy for helping us in data collection.

References

1. MacLennan AH. The prevalence of pelvic floor disorders and their relationship to gender, age, parity and mode of delivery. Br J Obstet Gynaecol. 2000;107:1460–70.
2. Sultan AH, Kamm MA, Hudson CN, et al. Anal-sphincter disruption during vaginal delivery. N Engl J Med. 1993;329:26.
3. Rortveit G, Hannestad YS, Daltveit AK, et al. Age and type-dependent effects of parity on urinary incontinence: the Norwegian EPINCONT study. Am Coll Obstet Gynecol. 2001;98:6.
4. Rortveit G, Daltveit AK. Urinary incontinence after vaginal delivery or cesarean section. N Engl J Med. 2003;348:900–7.