ORIGINAL ARTICLE

Fecal Incontinence in Women after Vaginal Childbirth and its Contributing Factors

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ABSTRACT

Aim: To determine the frequency of fecal incontinence and its contributing factors after vaginal childbirth.
Methods: This cross-sectional study was conducted at Department of Obstetrics and Gynecology at Sir Ganga Ram Hospital, Lahore from 1st June 2013 to 30th November 2013. 240 women who fulfilled the inclusion criteria were selected for this study. Each patient was asked about any episode of involuntary leakage of stool and such complain even for once was regarded as anal incontinence and its contributing factors were questioned.
Results: The mean age of the patients was 26.4±4.3 years. There were 63 (26.3%) primiparous patients and 177(73.7%) patients of parity ranging from two and above. Fecal Incontinence was present in 81(33.7%) patients, among which 39 (48%) were primiparous, 43(53%) had laceration repair and 10 (12.3%) had undergone instrumental delivery.
Conclusion: The risk of fecal incontinence is higher among women after vaginal child birth in parous women. Fecal incontinence was found in 33.7% patients, among which 38 (46.9%) were primiparous, 40 (49.3%) had laceration repair and 10 (12.3%) had undergone instrumental delivery.
Keywords: Fecal incontinence, vaginal childbirth, contributing factors

INTRODUCTION

The involuntary loss of liquid or solid stool with or without the patient's awareness is called fecal incontinece.[1] Females are more prone to develop moderate to severe fecal incontinence as compared to men. The prevalence of anal incontinence ranges between 24% to 44% in population-based studies, occurring in all age strata of the adult female population. It is a devastating problem and is often associated with adverse effects on quality of life[2].

Factors influencing the risk for occurrence of fecal incontinence were studied in 6,205 patients by Guise JM et al. which elaborated that 29.3% women had fecal incontinence after child birth. Among these patients, 46% reported symptoms after first child birth. Mean maternal age was 28.5±6.0 years whereas 41% of women had delivered once, 34% had delivered twice and 24.6% had three or more deliveries. With Increasing age, there is decreased conduction along pudendal nerve and hence the resting anal pressure falls leading to decreased sensory function in the anorectal area. However, parity only leads to lower anal squeeze pressure. The female perineal body is a fibromuscular structure lying between the vagina and anorectum in the midline and it helps to strengthen the pelvic floor.[3] In an epidemiological prospective study in Rockford, Illinois (Johanson and Laf-ferty 1996), the overall prevalence of anal incontinence was 18.4%. Stratified by the frequency of occurrence - daily, weekly or once per month or less, the prevalence rates were 2.7, 4.5 and 7.1 per cent, respectively[4].

Received on 03-06-2020
Accepted on 17-12-2020

Perry et al. conducted a large postal questionnaire study in adults above 40 years of age who were living in the community. Major fecal incontinence (involuntary loss of solid stool) was reported by 1.4% and 0.7% had bowel symptoms which adversely affected the quality of life.[5] Sultan et al. conducted a prospective study on 202 women six weeks prior to delivery; 150 of them were seen six weeks after delivery. Out of those patients, 32 with abnormal findings were seen six months after delivery. He found that 13% of the primiparous women and 23% of the multiparous women who had delivered vaginally had anal incontinence or fecal urgency six weeks afterwards and a sphincter defect was visible in EAUS at that point in 35% of the primiparous women[6]. Kairaluoma et al. have published promising medium-term results of primary sphincter repair using the overlapping technique instead of the end-to-end technique, noting that occasional incontinence to flatus and stools occurred in 17 and 7% of the patients and that an EAS overlap was found in up to 94%[7]. Occult anal sphincter defects have been reported in several other connections: Donnelly et al. 35%, Rieger et al. 41%, Zetterström et al. 20%, Varma et al. 12.2 %, Faltin et al. 28%, Belmonte-Montes et al. 29%, Williams et al. 29%, and Nazir et al. 19%[8-13]. Fynes et al. noted that caesarean delivery performed in late labour does not protect the anal sphincter mechanism, probably because of neurological injury. There is some evidence that the routine use of caesarean section does not prevent anal incontinence[14,15].

The objective of this study was to determine the frequency and the contributing factors of fecal incontinence in women after vaginal childbirth. There were very few local studies available that assessed the women's symptoms during post-partum period in our population. These findings

will further highlight the need of assessment for fecal incontinence during postnatal visits. This will lead to early identification and management of the problem.

METHODOLOGY

This cross-sectional survey was conducted at Out Patient Department of Sir Ganga Ram Hospital for six months from 1st June 2013 to 30th November 2013. A total of 240 patients who satisfied the inclusion criterion were included by non-probability consecutive sampling after taking informed consent. Patients were examined and asked about the history of fecal incontinence and its contributing factors i.e. parity, instrumental Delivery and laceration Repair. Information was recorded in a predesigned proforma. All the collected data was entered into SPSS version 20 and analyzed. Qualitative variables like fecal incontinence, primiparity, Instrumental delivery and laceration repair were expressed using frequencies and percentages. Quantitative data like age and birth weight were expressed using mean and standard deviation. Stratification was carried out on the basis of age.

RESULTS

The mean age of our patients was 26.4±4.3 years. There were 10(4.1%) patients in the age range of 18-20 years, 191(79.5%) patients in the age range of 21-30 years and 39(16.2%) patients in the age range of 31-41 years. There were 125(52%) patients of parity range of less than three and 115(48%) patients of parity range of more than three. Out of 240, 81(33.7%) patients had fecal incontinence and 159(66.3%) patients didn't have fecal incontinence (Table I).

Among the contributing factors, 39(48%) patients were primiparous, 43(53%) patients had laceration repair and 10(12.3) patients had instrumental delivery (Table-II).

In the stratification of parity with fecal incontinence, in the parity of less than 3, there were 64 (79%) patients having fecal incontinence and in the parity of more than 3, there were 17 patients(21%) of fecal incontinence (Table 5).

Mean of child birth weight in patients with fecal incontinence was 3.0±0.43 as compared to 2.98±0.36 in patients without fecal incontinence (Table 6) which is statistically not significant (P Value > 0.05).

Table- I. Distribution of patients by fecal incontinence (n=240)

Fecal incontinence	n	%age
Primiparity	39	48
Laceration Repair	43	53
Instrumental Delivery	10	12.3

Table-II: Distribution of patients with fecal incontinence according to their contributing factors (n=81)

Contributing Factor	n	%age
Yes	81	33.7
No	159	66.3
Total	240	100.0

Table-III: Stratification of parity with fecal incontinence (n=81)

Parity	Fecal incontinence	
	Yes	Percentage
Less than 3	64	79
More than 3	17	21
Total	81	100

Table-IV: Mean Child Birth Weight with fecal incontinence and without fecal incontinence (n=240)

Fecal Incontinence	Mean Child Birth Weight	n
No	2.98±0.36	159
Yes	3.0±0.43	81
Total	2.99±0.39	240

P Value: > 0.05*

DISCUSSION

Fecal Incontinence is an embarrassing and devastating problem for ladies after vaginal child birth which impacts badly on their social life and self-esteem. Anal sphincter laceration at childbirth, with or without subsequent deliveries, is strongly associated with persistent long-term anal incontinence. Symptoms, however, do not necessarily deteriorate over time, as earlier medium- to long-term prospective studies have suggested[16,17]. Despite the fact that childbirth is a widely recognized risk factor for anal incontinence, little is known on the natural progression of symptoms after vaginal birth[18].

In order to capture the subjective experience of symptoms of fecal incontinence associated with vaginal child birth, the data was recoded from 240 patients presenting in the outpatient department 6 weeks after vaginal child birth. It was observed that primiparous women have a higher incidence of developing fecal incontinence than multiparous women. Out of 81 patients with fecal incontinence, 39(48%) patients had primiparity. Collectively 79% of patients with fecal incontinence were in the category of less than 3 parities and 21% had more than 3 parities on presentation.

As experienced by Zetterstrom J. et al. in which primiparous women had a low prevalence of anal incontinence prior to delivery, but had a higher risk of sustaining a sphincter tear compared to multiparous women.[18] In other studies conducted by Nordenstam J. et al and MacArthur et al, it was experienced that the risk of sphincter laceration was greatest at the first delivery and rare at subsequent deliveries.[19]

According to the literature, fecal incontinence is reported in 3-29% patients in post-partum period[20-23]. In the current study it was 33.7%.The factors affecting prevalence depend on the population studied, types of questions asked, how those questions are asked, the time passed since delivery, and the definitions of fecal incontinence. Overall, findings of the current study are comparable to the rates of fecal incontinence during pregnancy and post-partum mentioned by Eason et al. , Borrello-France et al. and Chaliha et al.[24,25] For example, Chaliha et al. in a cohort of 286 nulliparous women, reported rates of fecal incontinence at 34 weeks and 3 months post-partum to be 3% and 2.5%, respectively (CI 0.7%–6.2%)[26].

Nordenstam J. et al conducted a study which included the patients presenting from 1995 to 2008. This study showed a rise in rate of fecal incontinence at 6 weeks post-partum that decreased at 6 months and then increased again at one year post-partum. Interestingly, half of the women reporting fecal incontinence at one year had postpartum fecal incontinence (at 6 weeks and 6 months).The increase in fecal incontinence at 6 weeks after vaginal child birth is consistent with reports of urinary incontinence and pelvic floor strength following vaginal

delivery[27,28]. The decrease in symptoms at 6 months can also be due to recovery and healing of the neuromuscular and connective tissue components of the pelvic floor.

This study also evaluated other possible contributing factors which can possibly cause fecal incontinence after vaginal child birth. Mean of child birth weight in patients with fecal incontinence was 3.0±0.43 as compared to 2.98±0.36 in patients without fecal incontinence which is statistically not significant (P Value > 0.05).

CONCLUSION

It is concluded from this study that the risk of fecal incontinence is higher among women after vaginal child birth due to its contributing factors as it is evident that primiparity, instrumental delivery and laceration repair were quite common in patients presented with fecal incontinence.

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