Anal Incontinence Among Postpartum Women- A Hospital Based Cross-Sectional Study

Sujatha B S[1], Vijayan C P[2], Raghavendra Rao[3]

ABSTRACT

Introduction: Anal incontinence is one of the under recognized problems seen in postpartum women. The common risk factors are advanced maternal age, high BMI, prolonged second stage of labour, child birth weight over 4kgs and instrumental delivery. Our objective was to find out the prevalence of anal incontinence among postpartum women and also the risk factors for anal incontinence

Material and methods: All the postpartum women attending the clinic after 6 weeks of delivery were included in the study. A standard questionnaire proforma was used a tool to collect data regarding symptoms of anal incontinence. Continence grading scales according to Jorge and Wexeners (0-20) scoring system was used to assess severity of symptoms. Risk factors of anal incontinence like age of mother, parity, BMI, mode of delivery, duration of labour and birth weight of baby were recorded and then analyzed.

Results: A total of 350 women in their postpartum period were studied. 9 (2.6%) of them had anal incontinence. The risk factors for anal incontinence that was statistically significant were age of the women, prolonged second stage of labour, instrumental delivery, high birth weight of the baby and high body mass index of the mother.

Conclusion: Postpartum women with risk factors for anal incontinence have to be followed up in the postpartum clinic and appropriate treatment has to be suggested.

Keywords: Anal incontinence

INTRODUCTION

Anal incontinence has a significant impact on life. It is often under reported, under recognized and poorly understood. Many do not seek medical attention due to embarrassment and the taboo nature of the problem. The international continence society defines the incontinence as the involuntary loss of flatus or feces which becomes a social or hygiene problem. The most important factor in maintaining continence is an anatomically normal anal sphincter complex and its intact neurological function. It is recognized that obstetric trauma is the most common cause of anal incontinence.[1] In postpartum women the prevalence of anal incontinence ranges from 4-14% in the first 3 months after delivery.[2] A number of risk factors for anal incontinence have been identified by various studies. These include advanced maternal age, high BMI, child birth weight over 4kgs, persistent occipito-posterior position of fetal head, prolonged second stage of labour, instrumental delivery, epidural analgesia and anal sphincter injury.[3-5] The main intention of doing this study is to find out the prevalence of anal incontinence in postpartum women which is usually under recognized and untreated and also to find out the risk factors associated with it. Objectives of the Study was to determine the prevalence of anal incontinence among postpartum women attending postpartum clinic after 6 weeks of delivery and to find out of the risk factors of anal incontinence in postpartum women.

MATERIALS AND METHODS

Hospital based cross sectional study was conducted in all postpartum women attending postpartum clinic after 6 weeks of delivery.

Inclusion criteria: All postpartum women attending postpartum clinic after 6 weeks of delivery

Exclusion criteria: 1. Patients with known neurological diseases which can affect the tone of anal sphincter. 2. Patients

Fetal continence scoring scale symptoms
1. Passage of any flatus when socially undesirable
2. Any incontinence of liquid stool
3. Any need to wear a pad because of anal symptoms
4. Any incontinence of solid stool
5. Any fecal urgency(inability to defer defecation for more than 15 minutes)
6. Any life style alteration
Scale (based on episodes of incontinence)
0 – Never
1 – Rarely (<1/month)
2 – Sometimes (1/week – 1/month)
3 – Usually (1/day – 1/week)
4 – Always (>1/day)
Source: Mahony et al, 2001; modified from Jorge and Wexner,1993[6]

Type of anal incontinence	Never	Rarely	Sometimes	Usually	Always
Solid	0	1	2	3	4
Liquid	0	1	2	3	4
Gas	0	1	2	3	4
Wears pads	0	1	2	3	4
Life style alteration	0	1	2	3	4

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not giving consent for study.

Study method: All postpartum women attending the postnatal clinic of a tertiary care hospital were enrolled into the study after obtaining their consent. Maternal demographic and obstetric data were obtained through interview and medical records. A standard questionnaire proforma was used as a tool to collect data regarding symptoms of anal incontinence. Continence grading scales according to Jorge and Wexeners(0-20) scoring system was used to assess severity of symptoms and score of 6 and above was taken as loss of continence. A detailed history and examination was done for these patients. Risk factors of anal incontinence like age of mother, parity, BMI, mode of delivery, duration of labour and birth weight of baby were recorded. Below given is the Jorge and Wexeners scoring system [Refer Table] for assessing anal incontinence.

- A score of 0 implies complete continence
- A score of 20 implies complete incontinence
- A score of 6 is taken as cut-off to diagnose anal incontinence

STATISTICAL ANALYSIS

Analysis was done using SPSS 11 software. Prevalence would be expressed as % and association with risk factors would be tested for significance using chi square test. P value of <0.05 was taken as significantly positive.

RESULTS

A total of 350 women were included and all the subjects satisfied the inclusion criteria. There were 9 (2.6%) women in the study population who were suffering from anal incontinence (Figure 1). 7 women had a score of 6 and 2 women scored 8 in the Wexener's scoring system.

Figure 2. and Table 1. shows that 6.1% of the women who were more than 30 year old had anal incontinence compared to 1.7% of women who were less than 30 year old. This difference was statistically significant with p value of 0.04 and it clearly shows that anal incontinence is common among elderly mothers.

Figure 3 and Table 2. shows that 3% of primiparous women and 2% of multiparous women had anal incontinence. This difference was not statistically significant(p value – 0.2). Hence multiparity as a risk factor for anal incontinence was not established in this study.

Figure 4. and Table 3. shows that among women who had prolonged second stage of labour (more than 1 hour), 11.5% of women had anal incontinence whereas in women who had normal duration of second stage of labour only 1.9% of women had anal incontinence. This difference was statistically significant with p value of 0.003. Hence prolonged duration of second stage of labour was found to be a risk factor for anal incontinence in postpartum women in our study.

Figure 5. and Table 4. shows that among women who had assisted (instrumental) vaginal delivery, 17.2% of them had anal incontinence and that with vaginal delivery with right medio-lateral episiotomy(RMLE) only 1.7% had anal incontinence. This difference was statistically significant with p value of 0.003. In this group 91 women underwent caesarean section and none had anal incontinence, hence not included in the table. This chart clearly states that anal incontinence was much more in women with instrumental vaginal delivery.

Figure 6. and Table 5. shows that 3 out of 8 women ie. 37.5%

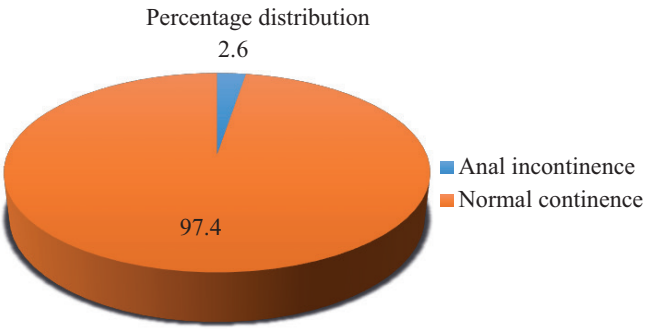

Figure-1: Shows the prevalence of anal incontinence in postpartum women

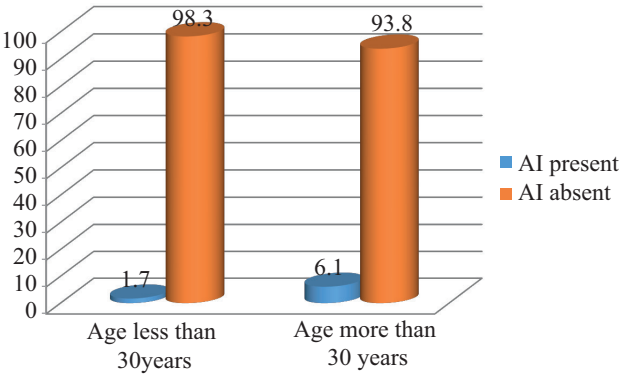

Figure-2: Relationship between anal incontinence(AI) and age of postpartum women

Age group	Anal incontinence		Total
	Present	Absent	
Less than 30 years	5 (1.7%)	280(98.3%)	285 (100%)
More than 30 years	4 (6.1%)	61(93.8%)	65(100%)
Total	9(19.0%)	81(81.0%)	350 (100%)

Table-1: Anal incontinence in different age groups

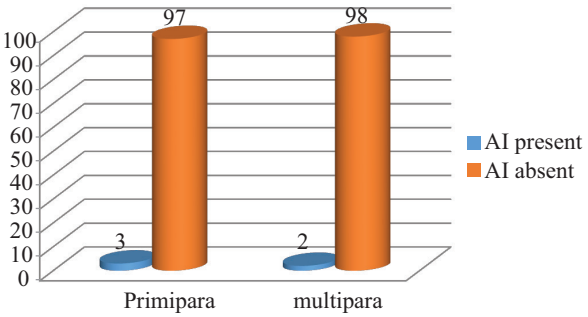

Figure-3: Relationship between anal incontinence(AI) and parity of women

Parity group	Anal incontinence		Total
	Present	Absent	
Primipara	7(3%)	235(97%)	242(100%)
Multipara	2(2%)	106(98.0%)	108(100%)
Total	9(2.6%)	341(97.4%)	350(100%)

Table-2: Anal incontinence and parity of mother

of women who had babies of more than 3.5kgs had anal incontinence compared to just 1.8% in women who gave birth to babies less than 3.5kgs. This difference was significant with p value of 0.001. Hence increased birth weight is a risk factor for anal incontinence.

Figure 7. and Table 6. states that 6.2% of the women who were overweight/obese(higher BMI) had anal incontinence compared to 1.8% in women with normal BMI. This difference was statistically significant with p value of 0.04. Hence the prevalence of anal incontinence was more among women with higher BMI.

DISCUSSION

The prevalence of anal incontinence in this study was 2.6%. In other studies done it ranged from 4-14%.This variation may be due to difference in study design. The distribution of study population was not uniform and not all women who delivered in this institute attended postnatal clinic. In this study questionnaire method of assessment of anal incontinence was followed by clinical examination. All the women who have symptoms of anal incontinence by questionnaire method had positive clinical findings like decreased anal reflex and weak anal grip which adds on to the accuracy of diagnosis of anal incontinence in this study.

In this study prevalence of anal incontinence was more among mothers older than 30 years. Mc Arthur et al in 2001 studied anal incontinence in 1879 women and found out that increased maternal age was a significant risk factor for development of anal incontinence.[7] In this study, it is observed that mode of delivery is significantly related to prevalence of anal incontinence which is similar to previous various studies.[8,9] From this study it is clear that instrumental delivery is

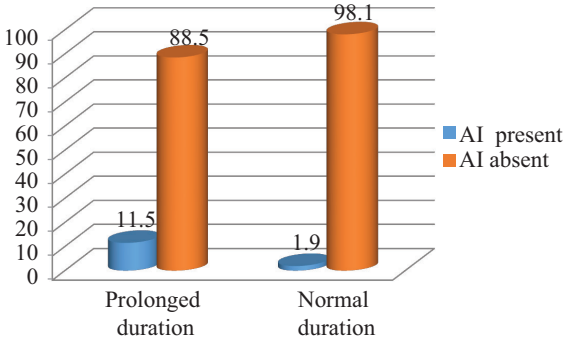

Figure-4: Relationship between anal incontinence(AI) and duration of second stage of labour

Duration	Anal incontinence		Total
	Present	Absent	
Prolonged	3 (11.5%)	23(88.5%)	26 (100%)
Not prolonged	6 (1.9%)	318 (98.1%)	324 (100%)
Total	9 (2.6%)	341 (97.4%)	350 (100%)

Table-3: Anal incontinence and duration of second stage of labour

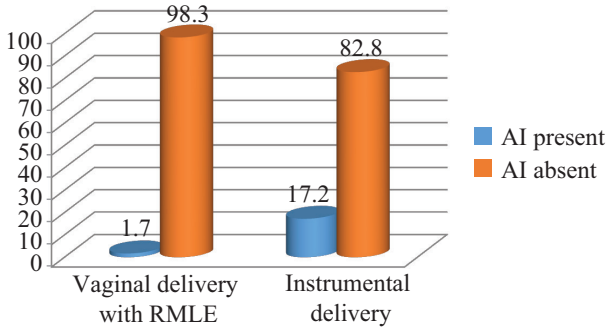

Figure-5: Relationship between anal incontinence(AI) and mode of delivery

Mode of delivery	Anal incontinence		Total
	Present	Absent	
Vaginal delivery with episiotomy	4 (1.7%)	226(98.3%)	230 (100%)
Instrumental delivery	5 (17.2%)	24 (82.8%)	29 (100%)
Total	9 (2.6%)	250 (97.4%)	259 (100%)

Table-4: Anal incontinence and mode of delivery

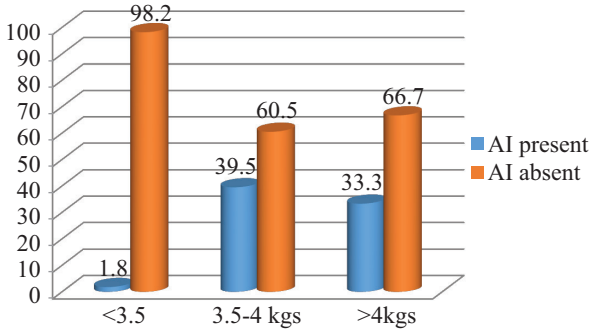

Figure-6: Relationship between anal incontinence and birth weight of babies.

Birth weight of babies	Anal incontinence		Total
	Present	Absent	
<3.5kgs	6(1.8%)	336(98.2%)	342(100%)
3.5-4kgs	2(39.5.0%)	3 (60.5%)	5(100%)
>4kgs	1(33.3%)	2(66.7%)	3(100%)
Total	9(2.6%)	341(97.4%)	350(100%)

Table-5: Anal incontinence and birth weight of babies

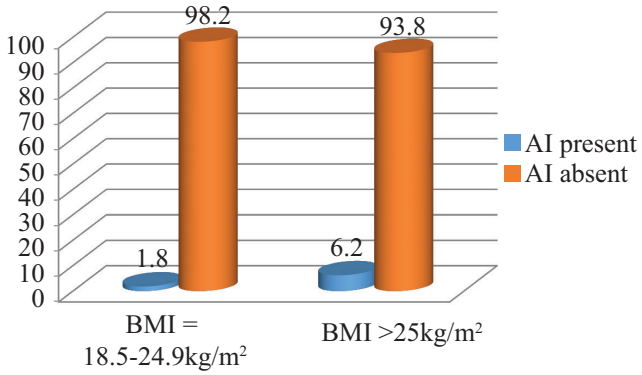

Figure-7: Relationship between anal incontinence(AI) and BMI (Body Mass Index) of mother.

BMI of mother	Anal incontinence		Total
	Present	Absent	
18.5-24.9kg/m²	5(1.8%)	284(98.2%)	289(100%)
>25kg/m²	4(6.2%)	58(93.8%)	61(100%)
Total	9(2.6%)	341(97.4%)	350(100%)

Table-6: Anal incontinence and BMI of mother

considered a major risk factor for anal incontinence. Similar results were concluded in various other studies. Pretlovell et al in 2008 did a comparative review study of 18 studies which showed that women who underwent instrumental delivery had a high risk of developing anal incontinence. Prolonged duration of second stage of labour was found to be a risk factor for developing anal incontinence in postpartum women in our study. Similar result was obtained in study done by Deleuw et al in 2001. In various studies, delivery of a high birth weight baby was considered to be a risk factor for anal incontinence.[10] We found similar results in our study. High BMI was found to be a risk factor for anal incontinence in our study which was similar to results provided by various studies.

CONCLUSION

The prevalence of anal incontinence in our study was found to be less compared to studies done in western population which is probably due to population variability and study design.

The risk factors which showed statistically significant association with anal incontinence were advanced maternal age, high body mass index of the mother, instrumental delivery, prolonged duration of second stage of labour and high birth weight of the baby.

REFERENCES

1. Johanson JF, Lafferty J. Epidemiology of fecal incontinence: the silent affliction. Am J Gastroenterol. 1996;91:33-6.
2. Groutz A, Fait G, Lessing JB et al. Incidence and obstetric risk factors of postpartum anal incontinence. Scand J Gastroenterol. 1999;34:315-8.
3. Donnelly V, Fynes M, Campbell D et al. Obstetric events leading to anal sphincter damage. Obstet Gynecol. 1998;92:955-61.
4. Eason E, Labrecque M, Marcoux S, Mondor M. Anal incontinence after childbirth. CMAJ. 2002;166:326-30.
5. Fitzpatrick M, McQuillan K, O'Helrlihy C. Influence of persistent occipito-posterior position in delivery outcome. Obstet Gynecol. 2001;98:1027-31.
6. Jorge JM, Wexner SD. Etiology and management of fecal incontinence. Dis Colon Rectum. 1993;36:77-97.
7. Mc Arthur C, Bick DE, Keighley MR. Fecal incontinence after child birth.Br J Gynaecol. 1997;104:46-50.
8. Chaliha C, Kalia V, Stanton SL, et al. Antenatal prediction of postpartum urinary and fecal incontinence. Obstet Gynecol. 1999;94:689.
9. Chaliha C, Sultan AH, Bland JM et al. Anal function: Effect of pregnancy and delivery. Am J Obstet Gynecol. 2001;185:247.
10. Hojberg et al. Prospective study of anal incontinence and risk factors associated with it. Obstet Gynecol. 2005;105:307.

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