

ANAL INCONTINENCE AMONG POSTPARTUM INDIAN WOMEN

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ABSTRACT: Introduction: Anal incontinence reported from other countries ranges from 4% to 14% among postpartum women. Among the Indian women's studies are not available. **AIM OF STUDY:** 1. Estimating the prevalence of anal incontinence among postpartum Indian women. 2. Assessing the influence of known risk factors for the development of sphincter injury and anal incontinence. **Study Design:** Cross sectional Study. **Study Setting:** postpartum clinic, Government Medical College Hospital, Kottayam, Kerala, South India – 686008. **Sample:** Consecutive 350 women attending the post-partum clinic from January 1st 2012 who were willing to take part in the study. They were examined at six weeks after delivery in the clinic. **METHOD:** Maternal Demographic and obstetric data were collected through interview and verification of medical records. A standardized questionnaire was the tool used to collect data about anal incontinence. Continence grading scales according to Jorge and Wexeners Scoring System was used to assess severity of symptoms and a score 6 (six) and above was taken as loss of continence. Risk factors of anal incontinence were collected from the medical records – [Age of mother, parity, Body Mass Index, medical history, mode of delivery, duration of labor, birth weight of the baby, perineal tear] Women with anal incontinence were examined for anal sphincter tone, anal grip and anal reflex. **Analysis:** Prevalence was calculated as a percentage and the associations with risk factors were analyzed using chi square test or fishers' exact test as the case may be. A Type I error of 0.05 or less was taken as significant association. **SUMMARY AND CONCLUSIONS:** A cross sectional survey among consecutive willing 350 postpartum women who attended the post natal clinic of the Government Medical College Hospital, Kottayam, six weeks after delivery revealed the following facts: 1) The prevalence of anal incontinence in postpartum women, six weeks after delivery was 2.6% as per Wexner Scoring System with a cutoff score of six (6). 2) The majority had mild incontinence and two (2) women had moderate incontinence. 3) The risk factors for anal incontinence, which showed statistically significant relation are older age (above 30years), high BMI, instrumental delivery, 3rd degree perineal tears, prolonged second stage of labor, Cephalo -Pelvic disproportion and large baby size. 4) The prevalence of anal incontinence is less in Indian population, compared to western population and most of Indian women had mild anal incontinence. This shows that the argument in favor of caesarean section to prevent anal incontinence is baseless. This can be used as an argument to promote vaginal delivery.

KEYWORDS: Anal incontinence, Anal sphincter, Jorge and Wexeners scoring, Body mass index, Birth weight, Perineal tear, Duration of labor, Instrumental delivery, CPD.

INTRODUCTION: Anal Incontinence has a significant impact on quality of life and vaginal delivery is a risk factor for that. Anal incontinence is often under reported, under recognized and poorly understood. It may remain as an unvoiced symptom and affected individuals may avoid

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seeking medical advice. Some women may even feel that these symptoms are a normal consequence of childbirth.

The international continence society defines anal incontinence as the involuntary loss of flatus or feces, which becomes a social or hygiene problem. It may be affected by many factors such as stool consistency and volume, colonic transit, compliance of rectal reservoir and mental function. The most important factor in maintaining continence is an anatomically normal anal sphincter complex and its intact neurological function.

It was previously thought that neuropathic injury to the pelvic nerves and pudental nerve was the leading cause of anal incontinence following childbirth. Since the advent of endo-anal ultrasound, sphincter defects were identified in women who were previously diagnosed with the neurogenic cause of the fecal incontinence. The prevalence of anal incontinence among postpartum woman ranges from 4% to 14.5% in the first three months after delivery as per different studies. The prevalence among Indian women remains unknown. Hence the study was planned and executed.

Aim of Study:

1. Estimating the prevalence of anal incontinence among postpartum Indian women
2. Assessing the influence of known risk factors for the development of sphincter injury and anal incontinence

Study Design: Cross sectional Study

Study Setting: postpartum clinic, Government Medical College Hospital, Kottayam, Kerala, S. India – 686008.

Sample: Consecutive 350 women attending the post-partum clinic from January 1st 2012 who were willing to take part in the study. They were examined at six weeks after delivery in the clinic.

METHOD: Maternal Demographic and obstetric data were collected through interview and verification of medical records. A standardized questionnaire was the tool used to collect data about anal incontinence. Continence grading scales according to Jorge and Wexeners Scoring System was used to assess severity of symptoms and a score 6 (six) and above was taken as loss of continence. Risk factors of anal incontinence were collected from the medical records – [Age of mother, parity, Body Mass Index, medical history, mode of delivery, duration of labor, birth weight of the baby, perineal tear] Women with anal incontinence were examined for anal sphincter tone, anal grip and anal reflex.

A tool for assessing anal incontinence

A validated, modified patient survey tool for anal incontinence is given below:

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Fecal 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	
0	Never
1	Rarely < 1/month
2	Sometime 1/week to 1/month
3	Usually 1/day – 1/week
4	Always > 1/day

Table I

Source: Mahony et al 2004: Modified from Jorge & Wexner 1993

A score of 0 - implies complete continence

A score of 20 – implies complete incontinence

A score of 6 (six) and above is taken as a cutoff to diagnose anal incontinence

Sl. No.	Type of anal Incontinence	Never	Rarely	Sometimes	Usually	Always
1	Solid	0	1	2	3	4
2	Liquid	0	1	2	3	4
3	Gas	0	1	2	3	4
4	Wears pads	0	1	2	3	4
5	Life Style alteration	0	1	2	3	4

Table II

Analysis: Prevalence was calculated as a percentage and the associations with risk factors were analyzed using chi square test or fishers' exact test as the case may be. A Type I error of 0.05 or less was taken as significant association.

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Observations:

Variable	Level	Number	(%)
Age in years	< 20	20	6
	21 – 30	265	75
	31 – 35	55	15
	>35	10	4
	Total	350	
Parity	1	242	68
	2	82	25
	3 and above	26	7
	Total	350	
BMI	18 -24.9 (Normal)	285	81
	25 – 30 (Over weight)	61	17.42
	>30 (obese)	4	1.1
	Total	350	
Medical Illness	NIL	236	67.4
	HT (Hypertension)	57	16.8
	DM (Diabetes Mellitus)	24	6.85
	HT & DM	11	3
	Hypothyroidism	8	2.1
	Others (Asthma/Allergy/ Depression)	14	4
	Rectal Surgery for hemorrhoids	1	

Table III: Baseline characteristics of study subjects

Variable	Description	Number	(%)
Mode of delivery	Vaginal delivery without episiotomy	47	1.3
	Vaginal delivery with episiotomy	203	58
	Forceps delivery	10	3
	Vacuum delivery	19	6
	Caesarean Section	76	22
Birth weight Baby	<2.5 kg	92	26
	2.5 – 3.4 kg	245	70
	3.5 – 3.9 kg	10	3
	4 kg and above	3	1.1
	Total	350	

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Perineal Tear	Intact Perineum	332	94.5
	1 ^o Tear	8	2.2
	2 ^o Tear	4	1.1
	3 ^o Tear	7	2
	Total	350	
Labor Induction	Induced	132	37.7
	Spontaneous	185	52.9
	Elective LSCI	33	9.4
Duration of 2 nd stage	< 60 minutes	324	92.6
	>60 minutes	26	7.4
Presentation	Vertex	330	94
	Breech	16	4.9
	Others	4	1.1

Table IV: Labour Related Variables

Prevalence of Anal incontinence in the study population

Total number of women having incontinence	:	9 (2.6%)
Mild variety (Score: 6)	:	7
Moderate variant (Score: 8)	:	2

Risk	Factor	Proportion of incontinence	P value
Age	Less than 30	1.7%	0.04
	More than 30	6.1%	
CPD	Present	13.3%	0.007
	Absent	2.1%	
Second Stage duration	Prolonged	11.5%	0.003
	Not prolonged	1.9%	
Perineal Tear	3 ^o Perineal Tear	57%	0.001
	Without perineal tar & smaller degree of tear	26%	
Instrumental Delivery	With instrumental delivery	17.2%	0.003
	Without instrumental delivery	1.7%	
Body weight	More than 3.5 kg	4.0%	0.001
	Less than 3.5 kg	1.8%	
BMI of mother	25 kg/m ² and above	6.2%	0.04
	Below 25 kg/m ²	1.8%	
Parity	Primipara	3%	0.2
	Multipara	2%	

Table V: Relationship between anal incontinence and risk factors

DISCUSSION: Epidemiology of anal incontinence after childbirth was unknown from India. Pregnancy and childbirth are established risk factors for anal sphincter injury and for the development of anal incontinence. Due to the inconstancy of definition, study design, and population variables prevalence studies are difficult to compare. The published prevalence from western publications varies between 4% and 14%. In the present study the prevalence is 2.6% and it is relatively low. All the women came out with the symptoms only on questioning. Nobody reported with such symptoms to the postnatal clinic. The majority of them had mild anal incontinence and two had moderate incontinence.

The reasons for a low prevalence of postpartum anal incontinence in India may be due to the following reasons. In most of the western studies a single symptom of incontinence is also considered as incontinence and a scoring system with objectivity was not used. In the present study modified Jorge & Wexners Scoring System was used. In western countries intra-natal care are provided by midwives and in the present study population the intra natal care was provided by doctors. The average birth weight of Indian babies is 2.5 kg, whereas in western countries, it is 3 and above. These are probable reasons why the prevalence in the study is 2.6% when compared to the high prevalence in western literature. In this study, the questionnaire method of assessment is followed by clinical examination. All the women with anal incontinence were having positive clinical findings like decreased anal reflex and weak anal grip and this adds on to the accuracy of diagnosis in this study. Endo anal ultrasonography was not done to demonstrate sphincter defects.

The majority of women in this study were between 20 and 30 years. It was found that anal incontinence is more in women above 30 years and it was found statistically significant. Cephalo - Pelvic disproportion when present it contributes as a risk factor and it is also statistically significant. Other risk factors which were having statistically significant association with anal incontinence are- increased birth weight of the baby, prolonged second stage of labor, development of third degree perineal tear, instrumental delivery and high body mass index of mother.

Among the women who delivered babies with birth weight above 3.5 Kilograms 4% had anal incontinence and the prevalence in others (having a birth weight below 3.5 kilograms) is only 1.8%. This was found a statistically significant association.

Statistically significant association was not seen in this study with anal incontinence and high parity. It would seem logical that the more pregnancies a woman has, the more changes in the sphincter anatomy contributing for the anal incontinence will be there. However, published studies are not uniform in this matter and comparison between studies are difficult.

Among the statistically significant variables there are confounding between certain variables. Prolonged 2nd stage of labour and instrumental delivery is an example. We are aware that when the second stage is getting the prolonged chance of instrumental delivery is also high. Similarly, when birth weight of the baby is more chance of prolongation of the second stage of labor instrumental delivery and a chance for perineal tear are high. Which factor is contributing to the development of anal incontinence is not clear.

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SUMMARY AND CONCLUSIONS: A cross sectional survey among consecutive willing 350 postpartum women who attended the post natal clinic of the Government Medical College Hospital, Kottayam, six weeks after delivery revealed the following facts:

1. The prevalence of anal incontinence in postpartum women, six weeks after delivery was 2.6% as per Wexner Scoring System with a cutoff score of six (6).
2. The majority had mild incontinence and two (2) women had moderate incontinence.
3. The risk factors for anal incontinence, which showed statistically significant relation are older age (above 30years), high BMI, instrumental delivery, 3rd degree perineal tears, prolonged second stage of labor, Cephalo -Pelvic disproportion and large baby size. (Above 3.5 kms).
4. The prevalence of anal incontinence is less in Indian population, compared to western population and most of Indian women had mild anal incontinence. This shows that the argument in favor of caesarean section to prevent anal incontinence is baseless. This can be used as an argument to promote vaginal delivery.

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