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Case Report

Fecal Incontinence Due to Occult Obstetrical Anal Sphincter Injuries in Primiparous Women: A Case Report

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ABSTRACT

Introduction: A predisposing factor for fecal incontinence in women is vaginal birth, impacting between 24 and 44% of the female population. Fecal incontinence, characterized by the inadvertent expulsion of gas or excrement, constitutes a multifactorial condition. It causes discomfort and diminishes the quality of life for women. Owing to its occurrence in 0.6–9% of vaginal deliveries, obstetric anal sphincter injury (OASI) has been identified as the most prevalent cause of AI in young women, with a 15–61% incidence rate following primary repair.

Case Presentation: The case presented in this report involved a 26-year-old woman who presented with symptoms of difficult-to-control flatulence and defecation following vaginal delivery. The patient has a history of giving birth to her first child spontaneously at a midwife in June 2023; she found a tear in the birth canal, which was then stitched up. Another history of past illness has been unremarkable. Upon examination, vital signs were within normal limits. The patient was obese I, with a BMI of 27.3 kg/m2. Local examination of external genitalia within normal limits. A digital rectal examination showed that the anal sphincter was not palpable, the rectal mucosa was smooth, and other examinations were within normal limits. Lab examination showed normal results.

Conclusion: After an exhaustive examination, a diagnosis of fecal incontinence was made for the patient. The patient was treated with colporrhaphy and sphincterorrhaphy, both of which produced favourable outcomes.

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INTRODUCTION

There is a various etiologies of traumatic injuries to the anus and perineum, including trauma of the pelvis, sexual intercourse, and iatrogenic causes, and may result in sphincter impairment [1]. During the descent of the fetus, the birth canal is stretched and compressed, resulting in pudendal nerves becoming demyelinated and denervated [2,3]. Obstetric anal sphincter injuries (OASI) are muscle injury that occurs after delivery. In the current categorization, the spontaneous perineal lacerations in third- and fourth-degree are also included in OASI [4,5].

OASI is the main etiology of anal incontinence (AI) in women, causing significant psychological, bodily, and social distress. Sphincteroplasty, for example, is a primary repair that is performed as soon as feasible after childbirth and serves as the mainstay of treatment. OASIS can cause short-term complications such as breakdown of the wound and formation of hematomas, abscess formation, and recto-vaginal fistula formation, as well as long-term complaints such as pain in the

perineum and dyspareunia [5,6]. Perineal injuries that cause persistent pain and discomfort can lead to urine retention and defecation issues.

CASE PRESENTATION

A 26-year-old woman came in with symptoms of defecation and farting that were difficult to control since June 30, 2023. Four months later, the patient's complaints got worse, so the patient decided to come to the gynecology clinic at Seopra Oen Hospital and found abnormalities in the perineum. Due to limited facilities and infrastructure, the patient was referred to the RSSA Gynecology Polyclinic. At the RSSA gynecology clinic, the patient underwent an examination and found alvi incontinence due to an old grade IV perineal rupture. It was planned to undergo elective colporrhaphy and sphincterorrhaphy.

The patient has a history of giving birth to her first child spontaneously at a midwife in June 2023; she found a tear in the birth canal, which was then stitched up. Another history of past illness has been unremarkable. Upon examination, vital signs were within normal limits. The patient was obese I, with a BMI of 27.3 kg/m2. Local examination of external genitalia within normal limits. A digital rectal examination showed that the anal sphincter was not palpable, the rectal mucosa was smooth, and other examinations were within normal limits. Lab examination showed normal results.

The patient was diagnosed with incontinence alvi due to old grade IV perineal rupture (June 2023). Treatment for this patient is elective colporrhaphy and sphincterorrhaphy. The premedication given was cefazolin 2 grams, metoclopramide 10 mg, and ranitidine 50 mg. Post-operative treatment includes no head up until 12 hours post-op, fasting until flatus, maintaining urinary catheter until 24 hours post-op, then continuing mobilization. Pharmacological therapy includes gentamycin 2x80 mg (1x24 hours), metoclopramide 3x10 mg, ranitidine 2x50 mg, ketorolac 3x30 mg, tranexamic acid 3x500 mg and laxadine svr 3xC1 (**Fig.1**).

DISCUSSION

Fecal incontinence (FI) is described as the passage of feces via the anus involuntary or the failure to regulate the outflow of stool contents. Its intensity varies from a passage of flatus to full fecal evacuation involuntary and substantially alters a patient's quality of life depending on the severity of the disease [1]. Fecal incontinence is typically characterized as (1) passive incontinence, (2) urge incontinence, and (3) fecal seepage. The control of fecal passage is frequently associated with normal sphincter; however, other elements are also crucial. Therefore, fecal incontinence must be considered the frequent characteristic of numerous independent etiologies [2] (Table 1 and Table 2).

Vaginal delivery increases the risk for fecal incontinence in women, which affects 24-44% of all women. OASI happens in 0.6 - 9% of all vaginal birth and was described to be the most frequent cause after primary repair. Mucosa is impaired after vaginal delivery leads to OASI, and its severity is assessed according to the Sultan classification [4].

Nulliparity, maternal age, labor induction, macrosomia of the fetus, malposition of the fetus and compound presentations are all risk factors for OASI injuries [6]. Vaginal birth is linked to an increased likelihood of perineal dysfunction, comprising urinary and fecal incontinence, as well as pelvic organ prolapse.

Fig.1. Pre- and Post-Operative Clinical Picture

This association stems from the physical strain placed on the perineum during the natural birthing process. The stretching and potential tearing of the perineal tissues can lead to weakened pelvic floor muscles, contributing to these issues. Conversely, cesarean section, though involving surgical intervention, appears to offer a degree of long-term protection against such complications. By bypassing the vaginal delivery route, cesarean births mitigate the direct trauma to the perineum, reducing the risk of associated dysfunctions. However, it's essential to weigh the benefits and risks of both delivery methods, considering individual circumstances and medical advice, to make informed decisions regarding childbirth. [7–9] (**Fig.2**).

OASI treatment options include primary operative repair, such as sphincteroplasty. Surgical repair is performed as soon as feasible after delivery when the OASI is found right after vaginal birth, serving as the primary therapeutic option. OASI repair can be postponed for up to 12 hours when resources for quick repair are unavailable with no negative consequences [8–10]. Including the possibility of undetected anal sphincter damage during childbirth or a functional breakdown of the sphincteroplasty procedure performed to repair the injury [11] (**Fig.3**).

This procedure aims to restore the integrity and function of the perineal body, which plays a crucial role in supporting the pelvic floor and maintaining continence. Medical and behavioral methods are the first-line treatments for FI. Alteration in dietary habits, control of water intake, and pharmaceutical therapies have been shown to effectively improve stool consistency and reduce gastrointestinal motility. Among other pharmacological therapies, zinc-aluminum ointment has been shown to enhance patient quality of life, potentially by enhancing smooth muscle contraction. Among various pharmacological therapies, zinc-aluminum ointment stands out as a promising option for enhancing patient quality of life, possibly by augmenting smooth muscle contraction. This ointment, composed of zinc and aluminum compounds, has demonstrated efficacy in alleviating symptoms associated with certain conditions, particularly those affecting the gastrointestinal or pelvic regions [8].

CONCLUSION

To enhance the diagnosis and management of fecal incontinence, healthcare providers must be aware of the condition and its consequences. Women with fecal incontinence symptoms and a history of obstetric perineal injuries should be referred to a specialist pelvic floor centre, a gynaecologist, or a colorectal surgeon

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CONFLICT OF INTEREST

The authors declare there is no conflict of interest.

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Table 1. Etiologies of Fecal Incontinence [3]

Categories	Details/Definition
Acquired structural abnormalities	Obstetric injury (vaginal delivery)
	Anorectal surgery (sphincterotomy, fistulotomy, and hemorrhoidectomy)
	Rectal intussusceptions, prolapsed
	Sphincter-sparing bowel resection
	Trauma (pelvic fracture, anal impalement)
Functional disorders	Chronic diarrhea
	Irritable bowel disease
	Inflammatory bowel disease
	Radiation proctitis
	Malabsorption
	Hypersecretory tumors
	Fecal impaction (paradoxical diarrhea)
	Physical disabilities
	Psychiatric disorder
Neurological disorders	Pudendal neuropathy (radiation, diabetes, chemotherapy)
	Spinal surgery
	Multiples sclerosis
	Dementia
	Disorders of the central neurological system: stroke, trauma, tumor, infection, spina bifida

Table 2. Risk Factors of Fecal Incontinence [3]

Variable		Categories
Age		
	Abnormal stool consistency	Diarrhea, loose stool, fecal impaction
Pregnancy, parity		
	Birth trauma	Operative Vaginal delivery, high degree laceration, episiotomy
Perianal surgery or trauma		Sphincterotomy, fistulotomy, hemorrhoidectomy, anal dilation
Neurologic cause		Dementia, stroke, spina bifida, spinal cord lesions, neuropathy, multiples sclerosis, cauda equina
Inflammation		Inflammatory bowel disease, fistula, radiation
Hemorrhoids		
	Prolapso	Pelvic organ prolapsed, rectal prolapse
Congenital anorectal abnormality		
obesity		
Bariatric surgery		
Limited mobility		
Urinary incontinence		

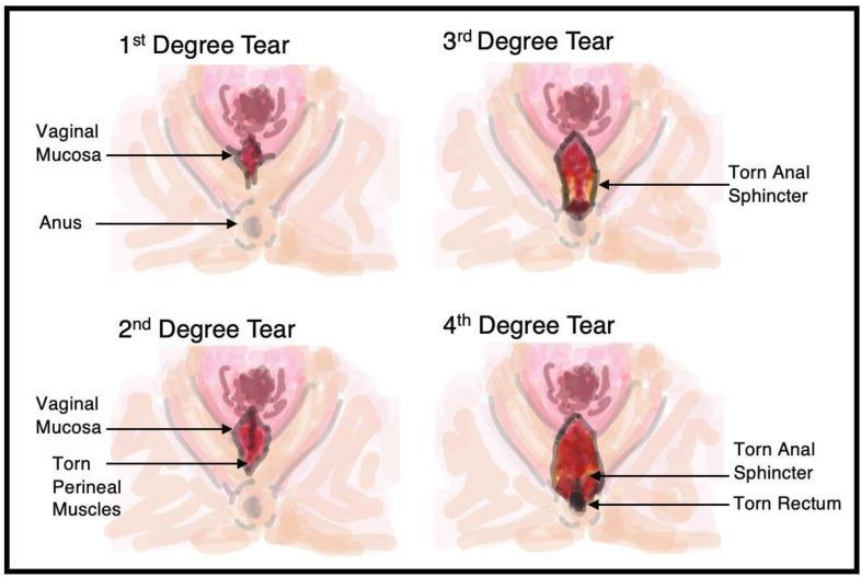

Fig. 2. Sultan Classification of Obstetric Perineal Injuries [5]

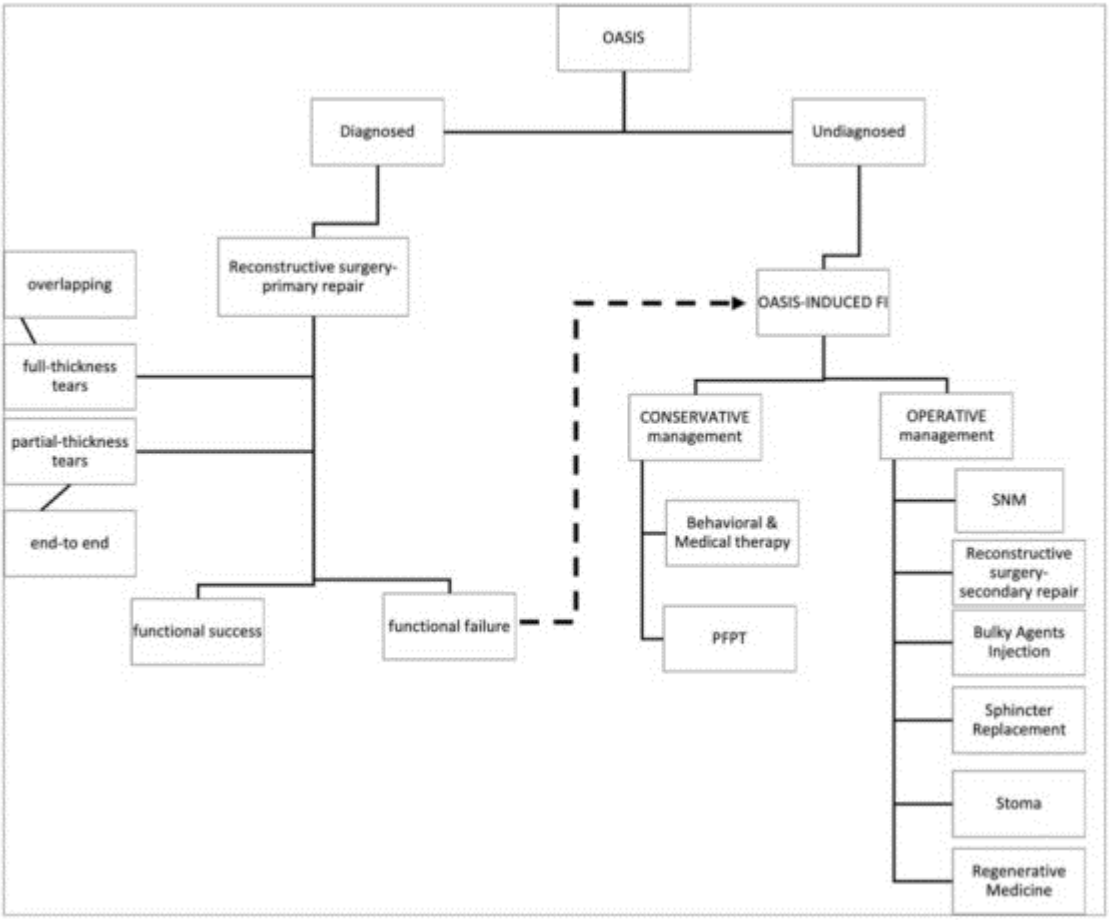

Fig. 3. Algorithm of Obstetric Anal Sphincter Injuries Management [11]