INSOLOGI: Jurnal Sains dan Teknologi
https://journal.literasisains.id/index.php/INSOLOGI
ISSN 2828-4984 (Media Online) | ISSN 2828-4992 (Media Cetak)
Vol. 3 No. 3 (Juni 2024) 345-351
DOI: 10.55123/insologi.v3i3.3624
Submitted: 19-06-2024 | Accepted: 22-06-2024 | Published: 28-06-2024

Rectovaginal Fistula Due To Chronic Perineal Tear; A Case Report

Yulia Margaretta Sari[1], Juan Habli Soufal[2]
[1]Urogynecology Division, Department of Obstetrics and Gynecology, Dr. Djamil Central General Hospital, Padang, Indonesia
[2]Department of Obstetrics and Gynecology, Medical Faculty of Andalas University, Dr. Djamil Central General Hospital, Padang, Indonesia
Email: [1]yulia_kino@yahoo.com, [2]juan.habli.93@gmail.com

Abstract

An abnormal connection that exists between two epithelial surfaces or lumens of the rectum that reaches into the vagina is known as a recto-vaginal fistula (RVF). RVF is one unfortunate consequence of the underlying condition, such as trauma or surgery. According to the patient recap of the urogynecology clinic at M Djamil Hospital Padang (2023), from January to September, 6 patients had cases of rectovaginal fistula that needed to be repaired. Treatment of the underlying condition, the fistula, and its associated complications all fall under the umbrella of RVF management. Given that obstetrics, procedure is still the main cause in this case, the role of the field of urogynecology in the management of surgical interventions is important to maintain the quality of life of a woman. In this case report we present a case report of a 24-year-old woman with rectovaginal fistula and anal incontinence caused by chronic total perineal tear. The patient complained of feces discharge from the vagina since giving spontaneous birth to the first. Physical examination found defects in the internal sphincter (IAS) and external sphincter (EAS) at 11 until 14 o'clock. The patient then underwent sphincteroplasty and perineorrhaphy and showed improvement after surgical intervention

Keywords: *Rectovaginal Fistula, Chronic Perineal Rupture, Obstetrics Procedure, Surgical Interventions*

1. INTRODUCTION

Perineal trauma occurs either spontaneously with vaginal delivery or secondarily as an extension to an episiotomy. Severe perineal trauma can involve damage to the anal sphincters and anal mucosa. Clinical manifestation can be showed as rectovaginal fistulae.

Obstetric Anal Sphincter Injuries (OASIs) remain an important complication of vaginal delivery and its incidence appears to be rising. While many women suffer no consequences, others develop varying degrees of flatus and faecal incontinence, which correlates to the degree of tear sustained.

Rectovaginal fistula (RVF), defined as any abnormal connection between the rectum and the vagina, is a complex and debilitating condition. RVF can occur for a variety of reasons, but frequently develops following obstetric injury. Patients with suspected RVF require thorough evaluation, including history and physical examination, imaging, and objective evaluation of the anal sphincter complex. Prior to attempting repair, sepsis must be controlled and the tract allowed to mature over a period of 3 to 6 months.

A fistula is an aberrant junction between two normally connected epithelial surfaces or lumens that creates a passageway to the nearby surface or lumen. Depending on the etiology of the fistula, the patient's characteristics, and the therapy the patient has had, the

location, size, duration, activity, and symptoms of a recto-vaginal fistula can vary substantially.

Depending on the reason, there are different incidences of rectovaginal fistula. There were 21 individuals with a rectovaginal fistula between 2011 and 2014 in a study done at the Ibn Sina University Hospital in Rabat, Morocco. Recovery may occur in individuals with obstetrically-induced rectovaginal fistulas under conservative treatment, but for some women without surgical repair, recovery may be challenging. Fourth-degree perineal tear occurs in up to 0.2% of vaginal deliveries. These fourth-degree tears heal by secondary intention and result in total perineal defects or it can perform fistulae. Longterm outcome influence women's quality of life. Therefor prompt diagnosis and treatment play important role in managing this case. Surgical technique is also challenging due to complexity of the case.

2. CASE REPORT

A 24 year old female was reffered to Dr M Djamil Hospital with diagnosis of rectovaginal fistulae. Previously the patient complain of fecal leakage from vagina 1 week before admission. Patient had vaginal delivery a week earlier with history of episiotomy, the baby was born with vacuum extraction with baby weight 3000 grams. A day after delivery patient complained fecal discharge from vagina. Patient was discharge home for a week. Second repair was attemped a week after delivery because of the fecal leakage. In the second day after operation, patient still complained fekal leakage from vagina and then patient was referred to Urogyneecology Outpatient Clinic of M Djamil Hospital.

From anamnesis patient complained disturbance of daily life due to the leakage of stool and flatus. Patient also complained fecal urgency and always use pads. Patient did not have any other comorbidities either drug allergy. Patient is a housewife with mild activity.

General condition of this patient was stable with no abnormality in in other systems. Genitalia examination revealed fistula and chronic perineal tear. Defect in posterior vaginal mucosa was seen approximately 0,5 cm proximal fouchette. Pill roling motion was positive at 11-14 o'clock.

Anal sphincter ultrasound revealed defect in both internal and external anal sphincter at 11-14 o'clock.

Patient was prepared for conservative management until 3 month. Conservative treatment with wound care, high protein diet and vulva vaginal hygiene were performed in this patient awaiting optimal time to do the repair.

Wound care with Permanganas Kalikus solution was suggested to the patient for two weeks. And definite repair of chronic perineal tear will be done 3 month after the initial repair.

After 3 month sphincteroplasty and perineoraphy procedure was performed to repair the defect. Evaluation under anesthesia must be done to identify the correct anatomical landmark, especially identifying external anal sphincter. Rectovaginal fistulae was incise until fouchette, and dissection was performed to release vaginal mucosa. Combination of blunt and sharp dissection was performed to make sure that the vaginal mucosa was mobile and separated from anal mucosa.

Identification of external anal sphincter by using allis clamp and dissect until external anal sphincter was mobile. External anal sphincter was released until Ischio anal fat. Anal mucosa was stiched interruptedly with PGA 3.0. Internal anal sphincter was sutured with horizontal mattrass sururee by using PGA 3.0 External anal sphincter was

sutured with overlapping technique by suiang PGA 2.0. The operation was ended with perineoraphy to build new perineal body.

During post operative period, broad spectrum intravenous antibiotic combine with oral metronidazole and analgetic were given to the patient. Low residual diet was given in the first 3 day, and stool softener was given additionally depend on fecal consistency. Ice pack compress can be perform to decrease pain in perineum. In the first week post operation patient was suggested to do vulva and vaginnal toilet with sitz bath by using Permanganas Kalikus solution every 12 hour for 20 minute.

Patient was discharge 3 days post operative with satisfactory condition. During first consultation at 2 weeks after operation, symptoms and clinical condition was improved. Patient denied any fecal leakage from vagina, can hold flatus and never use pads.

Post operative follow up in this patient performed every month until 3 month. At the last month of follow up. Clinical sign of anal incontinence or any fecal leakage from the vagina werw absent. Physical examination revealed smooth posterior vaginal mucosa without defect or inflammation. Perineal body was intact with the length approximately 4 cm.

We performed sphincter ani ultrasound to evaluate the result of the operation. Ultrasound evaluation indicate that the anal spincter muscle were unite. Overlapped external anal sphincter muscle was seen in ultrasound.

Education abour future pregnancy and mode of delivery was given to the patient. Patient was suggested to delayed her next pregnancy until 2-3 years. In addition to mode of delivery, it will depend on several category such as clinical sign and symptoms, anal sphincter defect and anal manometry measurement.

3. DISCUSSION

The incidence of Obstetrical anal sphincter injury (OASIS) in 0.25% to 6% of vaginal deliveries worldwide. In several case OASIS is reported to have a good outcome, it can have some lshort and long term consequences. Anal incontinence is increasedby 2.27 to 3.97-fold after 20 years following OASIS, beside it can also increase the risk of ano-rectovaginal fistula (ARVF). ARVF incidence is reported in 0.2 to 4 per 1000 deliveries and in 1%–3% following OASIS.(Venara A, et al, 2022)

Risk factors for obstetric rectovaginal fistulae is in line with mechanism of injury. In the developing world, these are related to obstructed labor including a lack of access to emergency obstetric care, home delivery, stillbirth, nulliparity, short stature, teenage pregnancy, and lack of financial or decision-making capacity. In developed countries, these are related to OASIS, including extremes of maternal age, episiotomy, the use of forceps and/or vacuum, macrosomia, nulliparity, and occipital posterior positioning. (Dawes AJ, 2021)

Complication associated obstetric anal sphincter injuries (OASIS) during vaginal delivery are relatively rare events, with an incidence of approximately 5-13%. One of the most devastating complications is perineal wound breakdown, occurring with an incidence of 0.1-4.6%. Although uncommon, perineal wound complications can lead to significant morbidity, including chronic pain, incontinence, embarrassment, rectovaginal fistula, and loss of sexual function. (Santoso BI, et al, 2021)

There are a few rectovaginal fistulas that have no symptoms. However, rectovaginal fistula can significantly lower a woman's quality of life when symptoms show up. Surgeons have a difficult time diagnosing and treating rectovaginal fistulas. Understanding the fistula's size, location, etiology, and tissue quality is necessary for successful treatment. (Sultan AH, et al 1993; Das B et al, 2016)

The most frequent cause of anal incontinence is obstetric-associated anal sphincterinjury (OASIS), which can lower a woman's quality of life. Fistula formation is brought onby obstetric trauma brought on by protracted labor, the child's presenting part pressingagainst the pelvic soft tissues, and widespread ischemia injury causing tissue necrosis and laxity. Fistula formation is also frequently brought on by third- and fourth-degree lacerations, particularly those that result from tough delivery and have an episiotomy. Although these lacerations typically receive initial treatment after birth, they could deteriorate because of an infection or inadequate wound healing. (Sultan AH, et al 1993; Das B et al, 2016)

Obstetric anal sphincter injuries (OASIs) occur in 1–9% of all vaginal deliveries [1, 2] and the rates of fourth-degree perineal tear vary between 0.03–0.2% of all vaginal deliveries [3–6]. In high-resource communities, the fourth-degree tears are diagnosed at time of delivery and local institution protocols are readily available for their management and repair. (Goh JT et al, 2021)

A rectovaginal fistula affected 0.5% of the 24,000 patients in a historical report, while 1.7% of patients experienced fourth-degree lacerations. According to a review of the literature by Homsi et al, 0.1% of patients who had episiotomies during childbirth reported having rectovaginal fistulas. Notably, it was discovered that 0.05 percent of patients who underwent median episiotomy experienced rectovaginal fistula development. Due to a lack of resources to facilitate childbirth, these fistulas are more prevalent in developing nations. (Das B et al, 2016; Homsi et al 1994; Lewis Wall , 2004)

Fecal discharge may be followed by a mild discharge, an unpleasant smell, or recurrent vaginal mucosa inflammation. Fecal incontinence is also crucial to consider. Examining the sphincter function will also direct the clinician to conduct additional research and assist with the surgical strategy. A palpable depression that is indicative ofa low-lying fistula or anovaginal fistula can be seen during a digital examination and is easily confirmed by anoscope and speculum examination. The vagina, where an infection is currently active, is frequently discovered to include feces. A tiny fistula may appear asan atypical depression or hole in the mucosa in the rectal mucosa, which contrasts noticeably with the lighter vaginal mucosa. To examine tissue induration and the size ofthe anterior perineum, a digital examination should be carried out with one finger insidethe rectum and the other inside the vagina. (Champagne BJ, 2010)

Sphincter injury and perineal thinning at the time of inspection should be immediately documented. Patients who have had radiation therapy in the past or who have a suspicion of cancer may need to undergo an anesthetic-assisted examination andbiopsy. In general, a confirmed diagnostic exam is only necessary if a rectovaginal fistula cannot be detected during a physical examination or if the severity of the underlying condition is uncertain. (Champagne BJ, 2010)

Specific assessment of ARVF management following OASIS is necessary in order to provide strong evidence on which to base recommendations regarding the best procedure.To assess rectovaginal fistulas, endoanal ultrasonography is also helpful, whether or not hydrogen peroxide is added. The width of the perineal body, the integrity of the internal and external anal sphincters, and the features of the fistula tract can all be evaluated. Magnetic resonance imaging is an alternative to ultrasound that has the same diagnostic accuracy while requiring less operator involvement. (Dwarkasing S, 2004; Sudo-Szopiska I et al, 2002; Venara A, et al, 2022).

All repair techniques involve reestablishing a healthy, well-vascularized rectovaginal septum, either through reconstruction with local tissue or tissue transfer via

a pedicled flap. The selection of a specific repair technique is determined by the level of the fistula tract and the status of the anal sphincter. Despite best efforts, recurrence is common and should be discussed with patients prior to repair. As the ultimate goal of RVF repair is to minimize symptoms and maximize quality of life, patients should help to direct their own care based on the risks and benefits of available treatment options. (Dawes AJ, et al. 2021)

No single repair technique consistently outperforms others in achieving successful fistula closure. In a recent systematic review, Göttgens et al were unable to recommend any specific repair technique due to small sample sizes, weak methodology, and high degrees of variation within the literature. The literature largely consists of patient series in which different techniques are used for different groups of patients according to surgeon preference. Smoking, obesity, and exposure to pelvic radiation have been associated with significantly higher rates of recurrence. (Dawes AJ, et al. 2021, Meister MR, 2018)

The use of evidence based methods to achieve an adequate primary repair is important in order to reduce potential morbidity that can result from wound infection, breakdown, or incomplete healing of the anal sphincter complex. If OASIS is diagnosed following vaginal delivery, surgical repair is carried out as soon as possible after childbirth and is defined as a primary repair, representing the mainstay of treatment. When resources for immediate repair are not available, OASIS repair may be delayed for up to 12 h without apparent detrimental effect. The goal of sphincter repair (either primary or secondary) is to restore a functioning anal canal by reconstruction of a muscular cylinder that is at least 2 cm thick and 3 cm long. (Meister MR, et al, 2018; Spinelli A, et al, 2021).

Perineal repair by an obstetrician right away following delivery is an important procedure. While secondary operations are defined as fixes that take many days or even weeks to complete because of a delayed diagnosis. As soon as feasible after birth is ideal for performing the primary repair. In situations where a qualified and experienced obstetrician is not available, a delay in repair is permitted. In a recent randomized research, Nordenstam*et al.* discovered no difference between women who underwent primary repair right away after the rupture and those who underwent primary repair 8–12 hours after the damage in terms of fecal incontinence 12 months later. In their opinion, suturing should not be postponed unless a doctor skilled in OASIS repair is not readily available.(Nordenstam J, 2008)

With a deep catgut suture through the inner third of the sphincter muscle and a second suture through the outer third of the sphincter, Royston approximated the end of the sphincter rupture in OASIS cases. By applying tincture Jodie or 5% argentum nitrate to the fistula's edge with a cotton stick and bathing the cytzbath in a betadine/kamilosan/calcium manganese solution 2-3 times per day, you can also encourage the healing of the fistula.(Nordenstam J, 2008

In the event of a fourth-degree laceration, repair of the anal mucosa is performed first with a interupted stitch of 3-0 Monocryl. Knots must be absolutely be tied externally to the anal canal. We prefer to use monofilament suture for all aspects of the repair because of the increased bac-terial adherence and subsequent infection risk with multifilament suture. After the anal mucosa has been reapproximated, or in the case of a third-degree laceration with complete dis- ruption of the sphincter complex, the next step is iden- tification and repair of the IAS. The IAS is responsible for the majority of anal sphincter resting tone and should be repaired when identified. The IAS is repaired via end-to-end anastomosis using a simple running stitch of 3-0 or 4-0 polydioxanone (PDS). This layer can be difficult to identify because it is often retracted laterally and is

substantially thinner than the EAS. Iden- tification is most easily achieved by using Allis clamps to grasp the laterally retracted fibers of the EAS and pull toward the midline. The EAS and IAS overlap for approximately 1.7 cm, and the IAS extends cephalad approximately 1.2 cm from the proximal margin of the EAS. With traction on the edges of the EAS, the thinner IAS can often be identified extending more proximally. Knowledge of this anatomical relationship is imperative in order to correctly identify the IAS. (Lamblin G, et al, 2021; Meister MR, et al, 2018).

Next, attention should turn to the EAS. There are 2 primary techniques for repairing the EAS, overlapping and end-to-end reapproximation, and knowledge of both methods enables providers to select the technique most appropriate for the clinical scenario. Overlapping repair of the EAS is performed using simple interrupted stitches of 3-0 PDS with the goal of overlapping the transected edges of the EAS by 1.5-2 cm in the midline. Sequential sutures are passed full thickness through both segments of the torn EAS and tied above the superior segment. Three to 4 sutures are placed to completely and securely reapproximate the full length of the overlap- ped segments. End-to-end anastomosis involves direct reapproximation of the ends of the torn EAS with horizon- tal mattress stitches of 3-0 PDS. Typically, in an end-to- end repair, we place 4 sutures—one on each posterior, inferior, superior, and anterior surfaces—to completely reapproximate the full surface of the torn EAS edges. Once the anal sphincter complex is repaired, the remainder of the laceration is repaired like a typical second-degree laceration. The deep layers of the vagina and the perineal body are reapproximated with figure-of-8 sutures of 2-0 Monocryl. (Meister MR, et al, 2018).

A final rectal examination is performed to ensure that the repair is adequate and to identify any sutures connecting the vagina to the rectum potentially made during the repair. After the surgical repair is done, the bladder is emptied by catheterization. Postoperative care consists in: Analgesia with nonsteroidal anti-inflammatory drugs (NSAIDS) and acetaminophen as first line analgesics, antibiotics for 2 days, and the use of postoperative laxatives. Early pelvic floor physiotherapy and a follow-up with an obstetri- cian are planned 10 days after the repair. (Lamblin G, et al, 2021)

4. CONCLUSION

Recto-vaginal fistula formation brought by obstetric trauma can significantly lowerwoman's quality of life. Preoperative workup should focus on identifying the level of the fistula, the presence of a sphincter defect, and any concomitant inflammatory or malignant disease. Repair should not be attempted until local sepsis has been controlled. There is no gold standard for RVF repair and all techniques have substantial failure rates. The management of ARVF following OASIS is complicated and leads to a high risk of recurrence. prompt diagnosis and early treatment play important role in managing rectovaginal fistulae.

REFERENCES

Champagne BJ. 2010. The ASCRS Manual of Colon and Rectal Surgery. Dis Colon Rectum. 2010;53(12):1712.

Das B, Snyder M. 2016. Rectovaginal Fistulae. Clin Colon Rectal Surg [Internet]. 16;29(01):050–6.

Dawes AJ, Jensen CC. 2021. Rectovaginal Fistulas Secondary to Obstetrical Injury. 2021. Clin Colon Rectal Surg. 34 (1): 28-39

Dwarkasing S, Hussain SM, Hop WCJ, Krestin GP. 2004. Anovaginal Fistulas: Evaluation with

Endoanal MR Imaging. Radiology. 231(1):123–8.

Goh JT, Natukunda H, Singasi I, Kabugho E, Browning A, et al. 2021. Surgical repair and follow-up of chronic 4th degree obstetric perineal tear (total perineal defect) in 2 centres in eastern Africa. Int Urogynecol J; 32(9): 2437-2442.

Homsi R, Daikoku NH, Littlejohn J, Wheeless CRJ. 1994. Episiotomy: risks of dehiscence and rectovaginal fistula. Obstet Gynecol Surv. 49(12):803–8.

Lamblin G, Boisredon MD, Picard L, Atallah A, Massardier J, et al. 2021. Fourth degree perineal tears : Surgical repair technique in 10 steps. Journal of gynecology Obstterics and Human Reproduction. 50(9

Lewis Wall L, Karshima JA, Kirschner C, Arrowsmith SD. 2004. The obstetric vesicovaginalfistula: Characteristics of 899 patients from Jos, Nigeria. Am J Obstet Gynecol [Internet]. 2004 Apr;190(4):1011–6.

Meister MR, Rosebbloom J, Lowder JL, Cahill AG. Techniques for Repair of Obstetric Anal Sphincter Injuries. 2018. Obste Gynecol Surv. 73(1): 33-39

Nordenstam J, Mellgren A, Altman D, López A, Johansson C, Anzén B, et al. 2008. Immediate or delayed repair of obstetric anal sphincter tears-a randomized controlled trial. BJOG. 115(7):857–65.

Santoso BI, Anggraini S, Sari Yulia M. Rectovaginal Fistulae in Post Repair Chronic Perineal Rupture. 2021. Indones J Obstet Gynecol 9(4): 219-222

Spinelli A, Laurenti V, Carrano FM, Diaz EG, Kiciak KB. 2021. Diagnosis and Treatment of Obstetric Anal Sphincter Injuries: New Evidence and Perspectives. 2021. J Clin Med. 10(15): 3261

Sultan AH, Kamm MA, Hudson CN, Thomas JM, Bartram CI. 1993. Anal-Sphincter Disruption during Vaginal Delivery. New England Journal of Medicine [Internet].23;329(26):1905–11.

Sudo-Szopiska I, Jakubowski W, Szczepkowski M. 2002 Contrast-Enhanced endosonography for the diagnosis of anal and anovaginal fistulas. Journal of ClinicalUltrasound. 30(3):145–50.

Venara A, Trilling B, Ngoma M, Brochard C, Duchalais E, et al. 2022. Anorectal fistula after obstetrical anal sphincter injury: Diverting stoma does not improve surgical results. Colorectal dis. 24(11):1371-78