Journal of Surgical Techniques and Procedures

Case Report
Published: 12 Dec, 2022

Rectovaginal Rupture after Consensual Vaginal Intercourse: A Rare Case and Review of the Literature

Gionga P[1], Panidis S[1], Chorti A[1], Tzikos G[1], Vouchara A[1], Pentara NV[2], Pana A[3], Ioannidis A[1], Paramythiotis D[1], Michalopoulos A[1]*

[1]*Propaedeutic Surgical Department, University Hospital of Thessaloniki AHEPA, Aristotle University of Thessaloniki, Thessaloniki, Greece*

[2]*Department of Radiology, University Hospital of Thessaloniki AHEPA, Aristotle University of Thessaloniki, Thessaloniki, Greece*

[3]*Department of Obstetrics and Gynecology, Papageorgiou Hospital, Thessaloniki, Greece*

Abstract

Background: According to the literature, the postcoital rectovaginal rupture is a traumatic injury related to nonconsensual intercourse or the insertion of foreign objects.

Case Report: We are presenting a rare case of rectovaginal rupture as a result of consensual vaginal intercourse, along with a review of the relevant literature. A 30-year-old woman came to the emergency department with vaginal and rectal bleeding after self-reported consensual coitus. It was mentioned no insertion of a foreign object in the vagina or in the anus. During the rectal examination that followed, it was detected a rupture of the anterior rectal wall. Intraoperatively, a ruptured posterior vaginal wall with wide communication with the rectum extending to the anal sphincters was ascertained. Primary repair of the rupture and end sigmoidostomy was performed successfully.

Conclusion: Injuries involving the sphincter mechanism of the anus are extremely rare in the literature.

Keywords: Rectal injury; Vaginal injury; Coital injury

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Correspondence:
Persefoni Gionga, Propaedeutic Surgical Department, University Hospital of Thessaloniki AHEPA, Aristotle University of Thessaloniki, Thessaloniki, Greece, E-mail: gionga.persa@gmail.com

Received Date: *22 Nov 2022*
Accepted Date: *08 Dec 2022*
Published Date: *12 Dec 2022*

Citation:
Gionga P, Panidis S, Chorti A, Tzikos G, Vouchara A, Pentara NV, et al. Rectovaginal Rupture after Consensual Vaginal Intercourse: A Rare Case and Review of the Literature. J Surg Tech Proced. 2022; 6(2): 1055.

Introduction

Rectovaginal injuries of non-obstetric origin are quite uncommon obstetric-related trauma remains the most common cause of injury in the female genital tract [2]. Reports in the literature of traumatic rectovaginal injuries, especially ruptures, are quite rare and offer only a general approach to this topic. Usually, those injuries are associated with introduction of foreign bodies from the vagina or anus and forceful, nonconsensual coitus [4]. Injuries of such severity resulting from consensual sexual intercourse are particularly rare. We present an extremely rare case of an extensive rectovaginal tear caused by consensual vaginal intercourse. An especially interesting aspect of this case is that the patient suffered a full-thickness laceration of the anterior rectal wall and rupture of both the internal and external anal sphincter caused by vaginal penetration alone.

Case Presentation

A 30-year-old nulliparous woman presented to the emergency department with significant bleeding from the vagina and rectum and perineal pain 3 h after consensual vaginal sexual intercourse. The onset of her symptoms was acute, immediately following sexual intercourse with a single partner. The patient denied any use of sex toys or other foreign bodies in her vaginal/rectal cavities, as well as any particularly rough form of penetration. She had no other symptoms and no weight gain, no prior history of colorectal disease, perineal injury or past surgical history. At clinical examination her pulse rate was 92 beats per minute, her blood pressure was 115/85 mmHg, her oxygen saturation was 99% at room air, her temperature was 36.9°C, and the respiratory rate 21 cycles per minute. The abdominal examination was normal. A rectum examination revealed a 3 cm long laceration in the anterior rectal wall and rectovaginal communication. The laboratory examination was unmarkable with a hemoglobin value of 10.0 g/dL. An abdominal and pelvic Computerized Tomography (CT) scan was obtained, which demonstrated air bubbles within the vagina and a discrepancy between the walls of the vagina and the anterior wall of the rectum, approximately 6 cm from the anus (Figure 1).

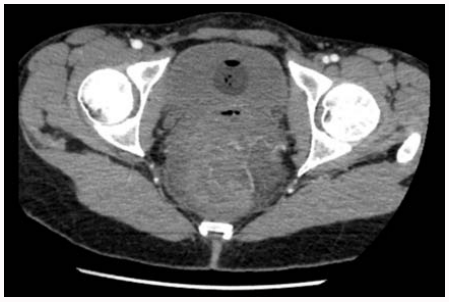

Figure 1: Abdominal and pelvic Computerized Tomography (CT) revealed air bubbles discrepancy between the walls of the vagina and the anterior wall of the rectum.

The patient was admitted to our department and transferred to the operating room for immediate surgical treatment. Intraoperatively, with the patient in modified lithotomy position and under general anesthesia, we observed a posterior vaginal wall laceration, a full-thickness anterior rectal wall laceration and a rupture of the internal and external anal sphincters. A rectal examination also revealed a wide rectovaginal communication, which allowed insertion of two fingers from the rectum into the vagina (Figure 2). The injury did not involve the perineum.

Transvaginal primary repair of the tear was performed and individual PDS sutures were placed in the rectal muscle wall and sphincters (Figure 3a). In addition, individual Vicryl sutures were placed in the vaginal wall as well as the rectal mucosa (Figure 3b). Finally, individual Vicryl sutures were placed at the mucosa of the vagina.

An end sigmoidostomy was performed through a small parietal incision, the peripheral end of which is located below the sigmoidostomy. Postoperatively, the patient was treated with IV broad-spectrum antibiotics. The patient's postoperative course was uneventful, and both the vaginal and rectal wounds were thoroughly inspected and cared for. She was discharged on the seventh postoperative day and was instructed to abstain from sexual intercourse until further evaluation. Two months later, both manual vaginal examination and colonoscopy confirmed complete healing of the wounds. The patient is scheduled to undergo a sigmoidostomy closure.

Discussion

Traumatic injuries of the vagina and the anus, with or without concomitant injury of the perineum may occur due to various mechanisms, including pelvic trauma, sexual intercourse, labor and iatrogenic injuries [1]. Perineal lesions are graded based on the severity and the extension of the lesion [3] (Table 1).

Obstetric-related injury is the most common mechanism of injury to the female reproductive system, followed by coitus [2]. The injury of the vagina or rectum causing by intercourse is a rare surgical entity. An initial tear of the posterior vaginal wall after intense vaginal penetration could lead to weakening of the vaginal wall. Thus, when anal penetration follows, the rectal wall may be perforated, especially in an anteverted position of the uterus. The posterior wall of the vagina has an anatomically loose support that facilitates injury to the vagina. In the majority of cases with vaginal or anal injuries after vaginal penetration, the uterus is in an anteverted position. The injury usually occurs to the right and to the posterior fornix, at dorsal decubitus coital position with the hips at hyper flexion [9].

The clinical presentation of patients with rectovaginal lacerations may be diversified. They usually present to the emergency department with varying degree of pain, hemorrhage and even hemorrhagic shock [9]. Vaginal bleeding after consensual intercourse usually relate to mild self-limited hemorrhage and the first coitus or vigorous penetration. These entities are no significant injuries that treated conservatively without requiring surgical treatment. Severe upper vaginal injuries or extended ruptures in the wall of the vagina or the rectum have been described. That may include damage to the anal sphincters or organs such as the liver and the spleen, lead to massive hemoperitoneum and acute abdomen. The treatment for these injuries requiring an urgent surgery [4]. These curious injuries usually occur after nonconsensual penetration, by the use of objects as sexual tools, rough sex and intercourse under alcohol or drugs abuse.

The literature suggests that major injuries are rare but they occur more often in nulliparous patients and furthermore in extreme age groups, such as in women of childbearing age [4]. Other risk factors include virginity and the lack of sexual experience, sexual abstinence, penovaginal disproportion, congenital abnormalities and atrophy of the vagina, young age, certain sex positions, no use of vaginal lubricants and forceful penile penetration.

The medical history is the basis for determining whether or not the injury was caused by sexual assault. The exact mechanism of the rectovaginal injury, as well as the true incidence, are difficult to verify [6]. Usually, the patients withhold information fearing the social implications, especially victims of nonconsensual intercourse. An accompanying damage to the anal sphincter strongly suggests sexual assault and it is considered imperative to inform the appropriate social services [7]. In the present case the patient repeatedly denied the insertion of any object into the vagina or anus. She also reported

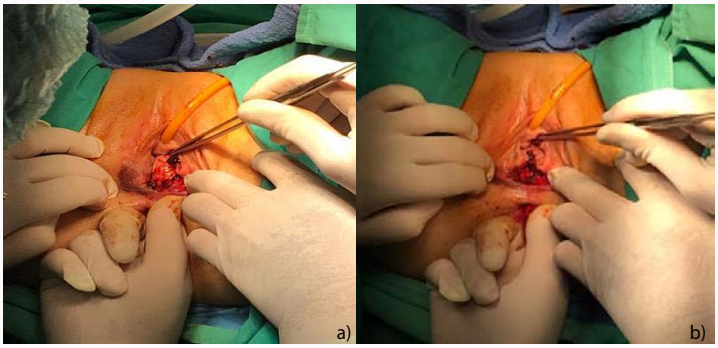

Figure 2a, 2b: Communication between vagina and rectum.

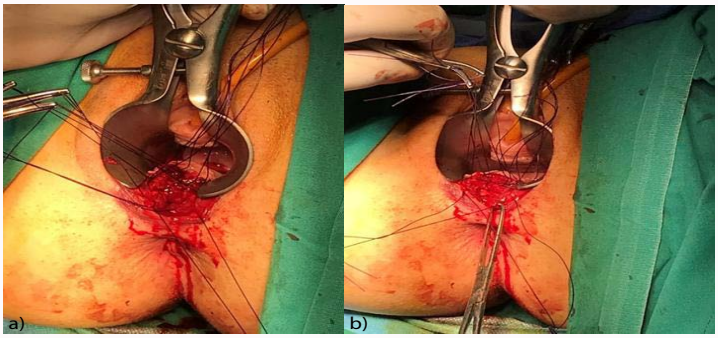

Figure 3: (a) stitching of the rectal muscle wall and the anal sphincters, (b) stitching of the rectal mucosa.

Table 1: Classification of perineal lacerations.

Degree of laceration	Definition
1st degree	Fourchette, superficial perineal skin or vaginal mucosa
2nd degree	Beyond the fourchette, perineal skin and vaginal mucosa to the perineal muscles and fascia
3rd degree	Fourchette, perineal skin, vaginal mucosa, muscles, and internal or external and sphincter are torn
4th degree	Fourchette, perineal skin, vaginal mucosa, muscles, anal sphincter, and anorectal mucosa are torn

that intercourse was terminated with the onset of symptoms.

Surgical treatment involves primary surgical repair of the rupture, with or without colostomy depending on the severity. Symeonidis et al. reported a similar case of consensual intercourse leading to rupture of the posterior vaginal wall with rectal communication, without involvement of the anal sphincter and they proceeded to primary repair and diverting loop sigmoidostomy [8]. Also, Purwar et al. reported a similar case of consensual intercourse with rectovaginal tear, without the presence of other lesions, requiring primary repair and colostomy [9]. In our case, the primary suturing of the sphincters and the vaginal mucosa in two layers and the performance of end sigmoidostomy were required, thus providing better healing possibilities and avoiding complications such as disruption of the wound. Rectovaginal injuries and ruptures of the sphincters that are untreated can lead to the formation of rectovaginal fistulas causing loss of fecal continence [10]. The immediate surgical management is also important due to the risk of infection [7]. The definitive restoration of the stoma can be carried out after 2 to 3 months when the wound has completely healed.

The presentation of this extremely rare case of rectovaginal injury including the anal sphincters after consensual intercourse is intended to highlight the importance of early diagnosis of lesions and proper assessment of vaginal injuries and determination of anal sphincter involvement as well as defining an immediate treatment strategy to avoid late complications. Significant bleeding may conceal major injuries, such as ruptures of the sphincter mechanism of the anus, which would require immediate surgical treatment and the creation of an end sigmoidostomy. Further studies are required to better understand the etiopathogenesis and intrinsic patient factors that lead to this condition.

References

1. Spinelli A, Laurenti V, Carrano FM, Gonzalez-Díaz E, Borycka-Kiciak K. Diagnosis and treatment of obstetric anal sphincter injuries: new evidence and perspectives. J Clin Med. 2021;10(15):3261.
2. Fallat ME, Weaver JM, Hertweck SP, Miller FB. Late follow-up and functional outcome after traumatic reproductive tract injuries in women. Am Surg. 1998;64:858-61.
3. Dutta DC, Konar H. DC Dutta's Textbook of Obstetrics. 7th ed. New Delhi: Jaypee Brothers; 2013. Chapter 28, Injuries to the Birth Canal; p. 422-31.
4. Usifo F, Sharma R, Macrae R, Hargreaves C, Swinhoe JR. Posterior vaginal fornix rupture and hemoperitoneum following sexual intercourse. J Obstet Gynaecol. 2006;26:482-3.
5. Hoffman RJ, Ganti S. Vaginal laceration and perforation resulting from first coitus. Pediatr Emerg Care. 2001;17:113-4.
6. Slaughter L, Brown CRV, Crowley S, Peck R. Patterns of genital injury in female sexual assault victims. Am J Obstet Gynecol. 1997;176:609-16.
7. Frioux SM, Blinman T, Christian CW. Vaginal lacerations from consensual intercourse in adolescents. Child Abuse Neglect. 2011;35:69-73.
8. Symeonidis N, Ballas K, Micha A, Psarras K, Pavlidis T. Consensual intercourse resulting in an extensive rectovaginal tear: An extremely rare occurrence. J Sex Med. 2015;12(2):572-5.
9. Purwar B, Panda SN, Odogwu SO, Joseph AT. Recto-vaginal sex leading to colostomy and recto-vaginal repair. Int J STD AIDS. 2008;19:57-8.
10. Boraiah S, Sheela SR, Shetty MVK. Post coital fourth degree rectovaginal tear: A rare case report. Int J Pharm Sci Res. 2012;3:4372-3.