Health Sciences & Disease
The Journal of Medicine and Biomedical Sciences

Case Report

Management of Recurrent Suprasphincteric Rectovaginal Fistula: Surgical Basis

Prise en Charge d'une Fistule Rectovaginale Suprasphinctérienne Récidivante : Bases Chirurgicales

Mpono Emenguele Pascale[1,2], Ngono Akam Vanina[1,2], Nyada Serge Robert[1,2], Ngo Dingom Madye Ange[3], Metogo Ntsama Junie Annick[1,2], Tompeen Isidore[1], Nna Audric Loïc[1], Maryanne Ndoh-Tabi Esapebong[1], Noa Ndoua Claude Cyrille[1,2]

1. Department of Obstetrics and Gynecology, Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1, Cameroon
2. Department of Obstetrics and Gynecology, CHRACERH Yaoundé, Cameroon
3. Department of Obstetrics and Gynecology, Faculty of Medicine and Pharmaceutical Sciences, University of Dschang, Cameroon

Corresponding author.
Mpono Emenguele Pascale.
Département de Gynécologie Obstétrique, Faculté de Médecine et des Sciences Biomédicales, Université of Yaoundé I, Cameroun, BP : 1364.
Téléphone : +237677199536
E-mail : mponopassy@yahoo.fr

Key words : recto-vaginal fistula, repair, recurrence, management
Mots clés : fistule recto vaginale, cure, récidive, prise en charge.
Article history
Submitted: 28 October 2024
Revisions requested: 6 November 2024
Accepted: 20 November 2024
Published: 27 November 2

ABSTRACT

Recto-vaginal fistula (RVF) is defined as an abnormal communication between the rectum and vagina across the recto-vaginal septum. We present the case of a 51-year-old female patient, G6P5014, with a 12-year history of stool and gas emissions through the vagina, following vaginal delivery of a 5010 gr newborn complicated by a 4th degree perineal tear. Three months later, a recto-vaginal fistula had been diagnosed followed by failed repair. Identified with a recurrent supra-sphincteric recto-vaginal fistula, the patient underwent a new repair of the fistula with favorable results. It is important to achieve tension-free closure of the various mucous membranes.

RÉSUMÉ

La fistule recto-vaginale est une communication anormale entre le vagin et le rectum à travers la paroi recto-vaginale. Nous présentons le cas d'une patiente de 51 ans, G6P5014, avec une histoire d'émissions de selles et de gaz par le vagin évoluant depuis 12 ans, à la suite d'un accouchement d'un nouveau-né de 5010 gr par voie vaginal compliqué par une déchirure périnéale du 4e degré. Trois mois après, une fistule recto-vaginale avait été diagnostiquée suivie d'un échec de réparation. Le diagnostic de fistule supra-sphinctérienne recto-vaginale récurrente posé, la patiente a subi une nouvelle réparation de la fistule avec des suites favorables. Il est important de réaliser une fermeture sans tension des différentes muqueuses.

INTRODUCTION

Recto-vaginal fistula (RVF) is defined as an abnormal communication between the rectum and vagina across the recto-vaginal septum. It can arise from a number of causes: obstetric complications, Crohn's disease, post-radiation, post-operative, crypto-glandular infection or other causes (1). When of obstetric origin, recto-vaginal fistula represents 6.62% when alone, and 8.09% when associated with vesico-vaginal fistula (2). In a study carried out at the Ngaoundéré Protestant Hospital, 20% of recurrences were noted (2). The repair of a recurrent fistula is of great interest due to the fibrosis that appeared after the first repair attempt and the risk of tension during suturing of the different mucous membranes, which could be the cause of a new failure. We present the case of a successfully repaired recurrent suprasphincteric rectovaginal fistula.

CASE PRESENTATION

The patient was 51 years old, G6P5014, non-menopausal, married, hairdresser. She came to the clinic with a 12-year history of leakage of liquid stool from the vagina. The onset dated back to the last vaginal delivery, with the notion of prolonged labor and fundal pressure in the second stage of labor. The delivery resulted in a newborn weighing 5010 grams. The delivery was complicated by a 4th degree perineo-vaginal tear, which was diagnosed immediately post-partum and repaired. At one-month post-partum, the patient consulted for leakage of liquid stool through the vagina. She underwent rectovaginal fistula repair, which failed 3 weeks later. Her history is marked by the delivery of three macrosomic babies (weighing between 4,800 and 5,010 grams). She was hypertensive, compliant with her treatment and non-diabetic. On physical examination, she was in good

general condition with a blood pressure of 155/74 mmHg. She was morbidly obese (BMI =46.71Kg/m2) with a large abdominal fat pad. Examination of the external genitalia revealed a clean vulva, with no signs of irritation. In the vagina, there was a solution of continuity at the junction of the middle and lower thirds of the vagina involving the lower rectum; located 1 cm from the posterior fourchette and approximately 0.5 cm in diameter, with moderate perifistulous fibrosis. The rest of the vaginal wall was unremarkable. Speculum examination of the cervix showed no lesions or abnormalities. Bimanual examination of the pelvic organs revealed a normal-sized uterus with no palpable mass or other abnormality. On rectal examination, the radial fold was preserved. The anal margin was intact, with preserved sphincter tone. The rectal ampulla was empty, with a clean finger pad. We made the diagnosis of recurrent supra sphincter rectovaginal fistula.

The patient was scheduled and prepared for a cure of recurrent recto vaginal fistula. Intraoperatively, the surgical steps were :

- exploration of the fistula path under anesthesia using a hysterometer (fig. 1);
- perifistinal infiltration of the vaginal wall with 0.9% saline (fig. 2);
- making a perifistular diamond-shaped incision (fig. 3);
- digital detachment and edge healing (fig. 4);
- identification of the rectal mucosa (fig. 5);
- hemming of the rectal wall with 2/0 Vicryl;
- suture of the vaginal wall (without tension) with continuous Vicryl 1 and placement of an intra-vaginal wick tinted with iodine antiseptic for 6 hours.

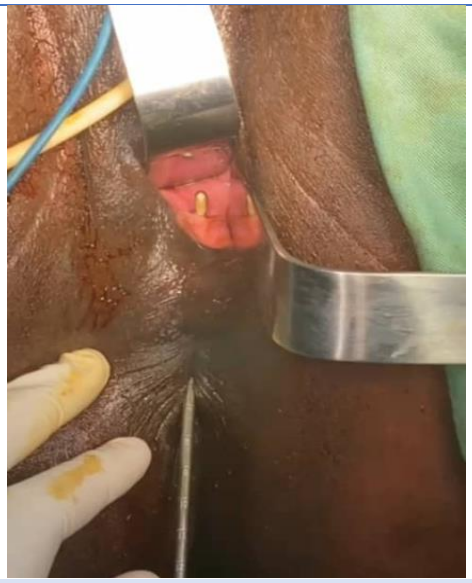

Figure 1: exploration of the fistula path under anesthesia using a hysterometer

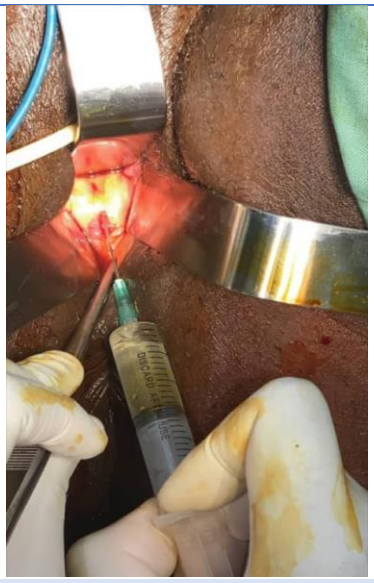

Figure 2: perifistinal infiltration of the vaginal wall with 0.9% saline

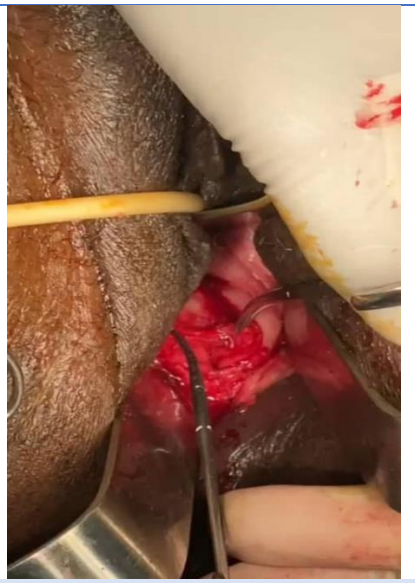

Figure 3: making a perifistular diamond-shaped incision

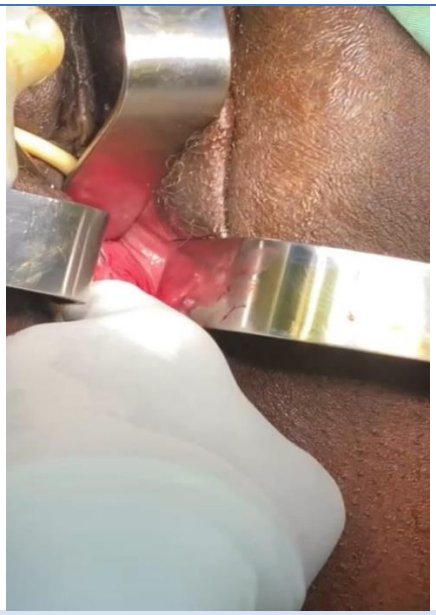

Figure 4: digital detachment and edge healing

Figure 5: identification of the rectal mucosa

Postoperative follow-up was straightforward. The evolution five months after fistula cure was favorable.

DISCUSSION

Risk factors for obstetric rectovaginal fistulas (RVFs) have been described in the literature: primiparity, prolonged second stage of labor, instrumental deliveries, episiotomies particularly on the midline, and high birth weight (3). Our patient was morbidly obese, with a history of delivering 3 macrosomic babies (4800-5010g); 12 years earlier, during her last delivery, she had a prolonged second stage of labor followed by a 4th degree perineal tear. This tear was repaired immediately after delivery, but failed with the formation of a recto-vaginal fistula a month later, for which an attempted repair resulted in recurrence three weeks later. The patient therefore presented 12 years later with symptoms of stool passage and flatulence through the vagina. This delay in consultation was probably due to the fear of a new therapeutic failure, but above all to the fact that the patient had found a way of reducing the symptomatology (which only appeared with liquid stools). Diagnosed with recurrent supra-sphincteric RVF, the patient underwent surgery.

Rectovaginal fistulas are not only a distressing experience for patients, but they pose a challenge to healthcare professionals especially in the context of high failure rates and recurrence(4). The decision on an appropriate management plan depends on the location, size, aetiology, integrity of surrounding tissue, presence of comorbidities, prior attempts at repair and surgeons experience(4–6). These factors, especially aetiology predict the outcome of surgical repair(3). Success rates range between 70-90% on the first surgical attempt (6) but reduce with an increase in the number of procedures most likely due to fibrosis and inadequate well-vascularised surrounding tissue, as well as the timing. Consequently, there is no universally accepted surgical technique that ensures successful closure of rectovaginal fistula (3,6,7). The possible outcomes of repair are: closure with continence, failed closure of fistula and incontinence. A successful outcome thus be one in which closure and continence are ensured, and this may require as many as up to 4 procedures(3,7,8). Depending on the fistula location, repair could be achieved by local or trans-abdominal approach and should be done in the absence of induration, inflammation or infection. Initially, it would be important to practice watchful waiting as some of the fistula may resolve spontaneously. Otherwise a period of 3-6months may be given to allow maturity of the tract before attempting repair(5,9,10).

There is no universally accepted surgical technique to ensure successful closure of fistula. Several operative procedures have been described in literature: fibrin glue, fistulae plug, sphincteroplasty and fistulectomy, advancement flap (transanal or transvaginal), Martius flap, Gracilis flap and transabdominal approach(5,6). The decision to use diverting colostomies is controvertial(3,6). Most gynaecologists tend to opt for the transvaginal approach to manage obstetric fistula as was in our case. Flapless transvaginal repair technique has been described and was shown to safely and effectively manage primary and recurrent low/midlevel rectovaginal fistula (11). The principles are basically similar to what was applied in our case. Firstly, proper exposure must be ensured. For a local approach, the patient is usually placed in standard lithotomy position, vagina is prepared surgically and a Foley's catheter is inserted. The fistula is localized and its course is traced with the help of a probe (a hysterometer in our case). Next is to ensure sufficient tissue mobilization. A perifistula infiltration of the vagina with 0.9% saline is done and a circular incision (diamond shaped in our case) is made on the vaginal epithelium surrounding the fistula. A digital detachment of the vagina and rectal mucosa is done and the entire fistula tract is excised. The goal is to achieve healthy tissue for subsequent closure. Once this is achieved, the rectal mucosa is identified and an extra-mucosal running or interrupted stitch is placed using vicryl 2.0/3.0. The vagina mucosa is then re-approximated with a running or interrupted stich with vicryl 2.0. It is important to ensure that these sutures are tension free, and that there is effective drainage, to anticipate the possibility of incontinence and its treatment, and to respect vaginal function. A proper follow up is necessary as there is a possibility of recurrence.

CONCLUSION

Recurrent supra-sphincteric recto-vaginal fistula represents a major therapeutic challenge. Its management requires mastery of the surgical basics such as identification of the fistula margins, separation of the two mucosa and tension-free suturing of each mucosa. This case highlights the importance of surgeon training and experience in fistula repair, especially in cases of recurrence. It is crucial to strengthen the capacity of healthcare systems to offer quality care to women with this complication. Research can also be carried out on assessing the psychosocial impact of interventions on patients in our context.

Contribution des auteurs

- MPONO EMENGUELE Pascale : prise en charge du malade et rédaction de l'article
- NGONO AKAM Vanina : suivi post opératoire du malade et relecture de l'article
- NYADA Serge Robert : suivi post opératoire du malade et relecture de l'article
- NGO DINGOM Marie Ange: relecture de l'article
- METOGO NTSAMA Junie Annick : relecture de l'article
- TOMPEEN Isidore: relecture de l'article
- NNA Audric Loïc : aide à la chirurgie et recherche des articles
- Maryanne NDOH-TABI ESAPEBONG: traduction et relecture de l'article
- NOA NDOUA Claude Cyrille : supervision lors de chirurgie, relecture de l'article

Remerciements

Nous remercions tout le personnel du bloc opératoire et du service d'hospitalisation de gynécologie du Centre Hospitalier de Recherche et d'Application en Chirurgie Endoscopique et Reproduction Humaine. Votre

engagement à dispenser des soins de qualité est notre force.

Conflits d'intérêt

Les auteurs ne déclarent aucun conflit d'intérêt.

REFERENCES

1. Manaouil D, Dumont F, Regimbeau JM, Duval H, Brazier F, Dupas JL, et al. Fistules rectovaginales acquises de l'adulte. Gastroentérologie Clinique et Biologique. 1 déc 2004;28(12):1267-79.
2. Ngaroua D, Aïssatou A, Dah'Ngwa D, Djibrilla Y, Ngah JE. Clinical Features and Management of Obstetric Fistula at the Protestant Hospital of Ngaoundéré (Cameroon). HEALTH SCIENCES AND DISEASE [Internet]. 2019 [cité 28 oct 2024];20(1). Disponible sur: http://hsd-fmsb.org/index.php/hsd/article/view/1112
3. Drusany Starič K, Distefano REC, Campo G, Norčič G. Delayed surgical management of rectovaginal fistula: a case report highlighting challenges and lessons learned. Front Surg. 2023;10:1260355.
4. Falih Noori I. Rectovaginal fistulas, outcomes of various surgical repair and predictive factors of healing success. A retrospective cohort study of 40 cases. International Journal of Surgery Open. 1 mai 2021;32:100335.
5. Das B, Snyder M. Rectovaginal Fistulae. Clinics in Colon and Rectal Surgery. mars 2016;29(1):50.
6. Beksac K, Tanacan A, Ozgul N, Beksac MS. Treatment of Rectovaginal Fistula Using Sphincteroplasty and Fistulectomy. Obstetrics and Gynecology International. 6 mai 2018;2018:5298214.
7. Pollaczek L, Rajagopal K, Chu J. Patient characteristics, surgery outcomes, presumed aetiology and other characteristics of fistula surgeries and related procedures supported by Fistula Foundation from 2019 to 2021: a multicentre, retrospective observational study. BMJ Open. 13 mars 2024;14(3):e078426.
8. Obstetric fistula repair failure and its associated factors among women underwent repair in Yirgalem Hamlin fistula center, Sidama Regional State, Southern Ethiopia, 2021: a retrospective cross sectional study | BMC Women's Health | Full Text [Internet]. [cité 17 oct 2024]. Disponible sur: https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-022-01866-z
9. Dawes AJ, Jensen CC. Rectovaginal Fistulas Secondary to Obstetrical Injury. Clin Colon Rectal Surg. janv 2021;34(1):28-39.
10. Kniery KR, Johnson EK, Steele SR. Operative considerations for rectovaginal fistulas. World Journal of Gastrointestinal Surgery. 27 août 2015;7(8):133.
11. Bhome R, Monga A, Nugent KP. A transvaginal approach to rectovaginal fistulae for the colorectal surgeon: technical notes and case series. Techniques in Coloproctology. 30 mars 2018;22(4):305.