

# Martius flap in repair of rectovaginal fistula caused by Bartholin's gland abscess

AMELIA DE ALMEIDA,<sup>1</sup> ODETE FIGUEIREDO,<sup>1</sup> PAULA RAMOA,<sup>2</sup> JOAQUIM COSTA PEREIRA<sup>3</sup>

<sup>1</sup>Gynecology and Obstetric Department, CHTS, Penafiel

<sup>2</sup>Gynecology and Obstetric De-partment, HPP, Boavista

<sup>3</sup>Surgery Department, CHTS, Penafiel

**Abstract: Background:** The most rectovaginal fistulas (RVF) are acquired. Although a Bartholin's gland abscess isn't unusual in women in reproductive age, RVF is a rare complication. **Case:** We present a patient with a low RVF. She had a previous history of four episodes of Bartholin's gland abscess. She was undergone LIFT surgery. Two weeks later she had a new Bartholin's gland abscess and three weeks after was diagnosed another RVF secondary to Bartholin's gland abscess. Surgical approached with LIFT surgery was performed and complemented with Martius graft. **Conclusion:** We reported rare case of rectovaginal fistula secondary a Bartholin's gland abscess and treated with Martius graft. With this case the authors highlight the im-portance of multidisciplinary approach and the relevance of interpositional graft techniques.

**Key Words:** Rectovaginal Fistula; Bartholin's Gland Abscess; Martius Flap; Recurrence.

## INTRODUCTION

A rectovaginal fistula is an epithelium-lined communication between the rectum and vagina.<sup>1</sup> The most rectovaginal fistulas are acquired although congenital abnormalities do exist.<sup>1,2</sup> The acquired fistulas include aetiologies such as trauma (operative, obstetric, and traumatic injuries), infection, inflammatory bowel disease, carcinoma, and radiation.<sup>1,2</sup>

Two percent of women develop a Bartholin's duct cyst or gland abscess at some time in life.<sup>3</sup> Bartholin gland infection may spontaneously drain causing a low rectovaginal fistula.<sup>2</sup> The treatment of rectovaginal fistula must be tailored to the individual fistula.<sup>1</sup>

## CASE REPORT

A 37-year-old patient presented to the colorectal surgeon with a history of passage of flatus from the vagina. She regarded a previous history four episodes of Bartholin's gland abscess in last two years. All cases were management with medical or expectant treatment. Examination in office revealed a low rectovaginal fistula. A surgical approaches with LIFT (ligation of intersphincteric fistula tract) technique was performed.

Two weeks after LIFT surgery the patient had a recurrence of Bartholin's gland abscess with spontaneous rupture and drainage.

Three weeks later the patient was admitted under the gynaecologist with malodorous vaginal discharge and perineal pain. A recurrence of the fistula was the first diagnostic hypothesis.

A multidisciplinary approached was performed, with colorectal surgeon and gynaecologist.

At operation, a fistulous tract was isolated with probe and the fistula extended from the Bartholin's abscess, traversed the rectovaginal septum to enter the rectum, a new rectovaginal fistula. LIFT surgery was performed it was dissected in a bloodless plane between the internal and external anal sphincters beyond the fistula tract. The tract was then ligated and closed on both the rectal and vaginal side the intersphincteric dissection was then closed at the skin (Figure 1).

A longitudinal incision was made in the left labia major, it was dissected the bulbo-cavernous muscle and its adja-

cent labial fat pad (the inferior flap pedicle was preserved). The Martius flap was mobilized to the perineal body, underneath the labia minor and anchored laying on repair fistula site (Figure 2).

The flap was sutured to vaginal edge fistula and the labial major incision was closed with Vycril® rapid 2/0 (Figure 3).

In the follow-up examination (6 weeks and 4 months after), both superficial and deep tissues had fully healed.

Histology confirmed an abscess with chronic inflammatory cell reaction.

## DISCUSSION

Despite the Bartholin's gland abscess can lead a rectovaginal fistula, in literature review only one case was reported.

We reported the first case of recto-vaginal fistula secondary to a Bartholin's gland abscess and treated with a Martius graft.

The major supportive structure between the vagina and rectum is recto-vaginal septum. The Bartholin's gland and duct are located bilaterally within the bulbo-cavernous muscle just lateral to the attachment of the recto-vaginal septum.<sup>4</sup>

There are many approaches reported for repairing a simple recto-vaginal fistula.<sup>1</sup>



Figure 1. – Recto-vaginal fistula.

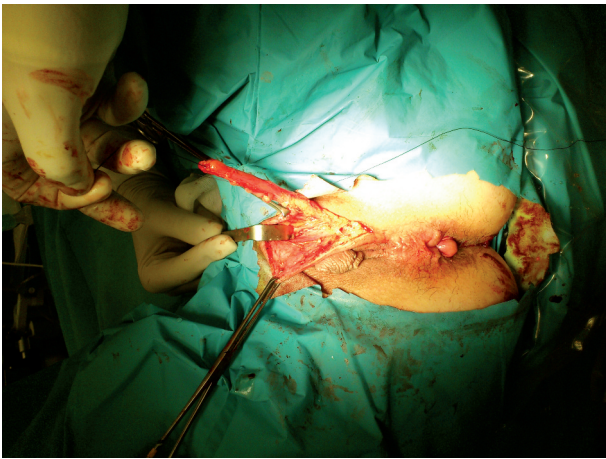


Figure 2. – Martius Flap.

The LIFT approaches that was developed for the treatment of intersphincteric anorectal fistulas has been adopted for treatment of recto-vaginal fistulas.<sup>2</sup>

Although the description of many surgical approaches for the treatment of low recto-vaginal fistulae (LRVF), all are associated with a high recurrence rate and a poor function.<sup>5</sup>

Multiple factors may lead to a recurrence of recto-vaginal fistula such as post-operative infection, extensive scarring with poor blood supply, inflammation pre-operatively, and technically inadequate repairs.<sup>1</sup>

In addition to some techniques for complex recto-vaginal fistulas, other procedures may be utilized, such other well vascularized tissue as an interpositional graft. Tissue used include the bulbo-cavernosus, gracilis, omentum, gluteus maximus, sartorius and rectus abdominus.<sup>6</sup> The most used interpositional graft technique is the Martius graft. This technique involves mobilization of the bulbo-cavernosus muscle with its labial fat pad and tunnelling it to be interposed between rectum and vagina.<sup>6</sup> It carries a success rate between 60-85%.<sup>5,6</sup>

The Martius flap repair has been well described in patients with recto-vaginal fistulas secondary to radiation injury. The purpose of tissue transfer procedures in patients with recto-vaginal fistulas is to provide healthy tension-free, well-vascularized tissue in the area of repair.<sup>6</sup>

White et al. performed fourteen Martius procedures on twelve patients with radiation-induced recto-vaginal fistulas. Eleven patients had successful closure of their fistulas with this procedure, and no operative complications occurred.<sup>6,7</sup>

Chi L. et al. reported nine patients were referred for Martius surgery, seven of the nine patients had undergone between one and six fistula repair session prior grafting procedure with multiples aetiologies. No recurrence was reported during the follow-up period and all patients had normal faecal continence. Only one patient had mild dyspareunia and no further surgical treatment needed.<sup>8</sup>

A Bartholin's gland abscess led to chronically inflamed, scarred, and poorly vascularized tissue, which inhibited wound healing.<sup>4</sup>



Figure 3. – Final result.

We used the Martius flap based on patient previous history: first she had Bartholin's gland abscess, second she had undergone a fistula repair 5 weeks ago and third she had a previous history of four episodes of Bartholin's gland abscess.

With this case the authors highlight the importance of multidisciplinary approach and the relevance of interpositional graft techniques.

#### REFERENCES

1. Sharon G, Gregorcyk. Rectovaginal fistulas and rectoceles; American Society of Colon Rectal Surgeon.
2. Teresa H., deBeche-Adams, Jaime L, Bohl. Rectovaginal fistulas. Clinics in colon and rectal surgery 2010; 22: 99-103.
3. Folashade O., Barbara J., Simmons, Yolanda. Management of Bartholin's gland duct cyst and gland abscess. American family physician 2003; 68; 135-140.
4. Emily Z, Deborah R. K, G. Willy Davila, MD. Rectovaginal fistula as a complication to a Bartholin gland excision. Obstet Gynecol 2011; 118; 489-91.
5. Pitel S, Lefevre JH, Parc Y, Chafai N, Shields C, Tiret E. Martius advancement flap for low rectovaginal fistula: short- and long-term results. Colorectal Dis. 2011; 13; 112-115.
6. David E, Brett R, Salim A, Cynthia S. Rectovaginal fistulas: current surgical management. Clinics in colon rectal surgery 2007; 20(2); 96-100.
7. White AJ, Buchsbaum HJ, Blythe JG, Lifshitz S. Use of the bulbocavernosus muscle (Martius procedure) for repair of radiation induced rectovaginal fistulas. Obstet Gynecol 1982; 60; 114-118.
8. Cui L, Chen D, Chen W, Jiang H. Interposition of vital bulbocavernosus graft in the treatment of both simple and recurrent rectovaginal fistulas. Int J Colorectal Dis. 2009; 24(11); 1255-9.

Correspondence to:

AMELIA ALMEIDA  
Rua Conego Rafael Alvares da Costa n. 120  
3 esquerdo  
4715-288 Braga (Portugal)  
e-mail: ameliyalmeida81@gmail.com