Modified Martius technique for complex vesicovaginal fistula repair

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The repair of perineal fistulas represents a challenge for surgeons in gynecologic oncology, in addition to the impact on the quality of life of the patient. We define complex fistulas, which are larger, recurrent, or associated with a malignant or post-irradiation condition. A Martius modified flap remains the simplest and most versatile interposition tissue for repairing these defects. The aim of this article is to show a gradual and illustrated approach to direct repair and the use of a Martius flap for a multiple complex vesicovaginal fistula.

A 37-year-old woman presented with a complex multiple vesicovaginal fistula diagnosed a month after laparoscopic hysterectomy for early-stage endometrial cancer. This rare situation was due to the excess radicality of hysterectomy including the vaginal cuff and, as a result of using a sealer with excessive energy for that maneuver. Due to the complexity and location of the defects, it was decided to use a surgical approach to correct it. As an innovation to the usual technique, we added ureteroscopy, which was definitive to rule out a ureteral injury.

A Martius flap is an important complement and can be ideal for large defects lending themselves to different modifications. Its fibrous component makes it a stronger graft than adipose tissue and, its blood supply promotes graft neovascularization. To avoid

Figure 1 Left Martius fat flap with postero-inferior blood supply prior to transposition under bulbospongiosus muscle to correct multiple vesicovaginal fistula defect.

Video 1 Ischiocavernosus m., ischiocavernosus muscle; Bulbospinosus m., bulbospongiosus muscle; external Pudendal A., external pudendal artery; obturator A., obturator artery; POD, post-operative day

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the risk of interrupting vascularization, it is key to leave enough
space for the flap, avoid its rotation, and carry out a suture without
tension. Even those surgical oncologists with no experience in these
sporadic practices and who wish to maximize success will find it to
be an extremely useful, relatively simple tool with low morbidity and
favorable esthetic results.4

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