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Traumatic Cloaca; Surgical Treatment of a Disabling Deformity

Massimo Mongardini, **Menelaos Karpathiotakis**

Department of Surgical Sciences, "Sapienza" University of Rome, "Umberto I" University Hospital, viale Regina Elena, Roma, Italy.

Editorial

Traumatic cloaca is a disabling deformity of the anus and vagina caused by the severe damage of the sphincter apparatus and of the perineal body, resulting in a common aperture for the rectum and vagina, as in congenital cloaca [1-4,9].

The most common cause is major obstetric injury occurred by median episiotomies that lead to third and fourth degree perineal lacerations, unrecognized or not repaired properly. The incidence is approximately 0.3% of all complicated vaginal deliveries. The resulting deformity is characterized by three-dimensional destruction of the perineal body, anterior disruption of the sphincter complex and loss of the distal rectovaginal septum of varying length. [1-4,7, 9] Other rare causes of traumatic cloaca may be severe injuries in women victims of sexual violence or by grave accidents in sports like cycling.

The disorders resulting by traumatic cloaca are mostly functional. These patients have severe fecal and flatus incontinence and symptoms similar to a rectovaginal fistula because of the lack of the distal rectovaginal septum. Consequently, most women suffer from grave perineal skin irritation and recurrent vaginal and urinary tract infections. Furthermore, difficulties con sexual activity is significant. Many women complain of dyspareunia or complete abstinence from sexual activity [1-4].

All these problems for the patients may lead to social distress and psychological disorders. The loss of voluntary evacuation control, although not a life threating disease, is a physical and psychological aggression to these women, resulting in progressive social isolation, alterations in the body image, anxiety and depression. A conservative approach from both the patients and physicians may lead to delay in treatment and diminished the quality of life [1-4,9].

A detailed history-taking and careful physical exam of the perineal body is often enough to make diagnosis of traumatic cloaca. Additional diagnostic tests, as endoanal ultrasound, anal manometry, transanal pudendal nerve stimulation, defecated MRI and Wexner incontinence score, can be performed in order to plan the appropriate surgical repair.

Various techniques have been described in the literature for repairing traumatic cloaca [1-9]. One of the surgical strategies most commonly used at our institution consists in a reconstructive plastic surgery of the perinal body (perineoplasty) and of the rectovaginal septum with puborectalis muscle interposition (levatorplasty) and overlapping external sphincteroplasty. In

Corresponding author:

Menelaos Karpathiotakis

enimdisify@hotmail.it

Department of Surgical Sciences, "Sapienza" University of Rome, "Umberto I" University Hospital, viale Regina Elena 324, 00161 Roma, Italy

Tel: +390649976440

two cases we modified this procedure by introducing the use of PRP gel (Platelet Rich Plasma) with the aim to facilitate proper tissue regeneration and consolidate the plastic reconstruction of perineal body.

Thus, between 2010 e 2014 two women with traumatic cloaca were submitted to surgical treatment by our team. Either patient had an open rectovaginal communication with a large anterior sphincter defect and total incontinence. The mean patient age was 36 years and the cause of the cloaca was obstetrical trauma with fourth degree perineal laceration in one patient and sexual violence with severe perineal tearing in the other patient. Primary fecal diversion with loop sigmoidostomy was performed in one patient.

In both patients the surgical technique we performed consisted of a trasverse skin incision between the anus e vagina, dissection of the ischiorectal fossae bilaterally up to the level of the levator muscles, division of the rectovaginal septum up to the level of the puborectalis muscle, mobilizzation of the sphincter complex, overlapping sphincteroplasty of the external anal sphincter, reconstruction of the perineal body by plicating the puborectalis muscle to the midline (levatorplasty) and repair involving flats across the perineum in one patient [2-5, 9]. In addition, we decide to proceed with the interposition of PRP gel over the levatorplasty e sphincteroplasty , while the skin closure was performed vertically in order to create a high -profile perineum (Figure 1-11).

With the aim to minimize the risk of complications (hematoma, wound infections, ischemia of flaps, fistulas or disruption of



Figure 1 Initial aspect of the cloaca.

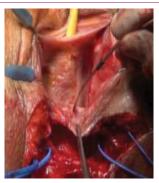


Figure 4 Dissection and mobilization of external anal sphincter muscle.



Figure 2 Trasverse incision in the rectovaginal septum.



Figure 5 Puborectal muscle dissection (levatorplasty).

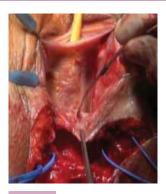


Figure 3 Rectovaginal fistula.

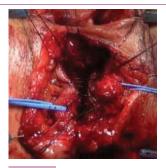


Figure 6 Plication of puborectalis muscle.

perineoplasty) and potentially failure of the repair we used, successfully, in both cases autologus Platelet Rich Plasma gel (PRP), recognized for its ability to promote wound healing and soft tissue sealing. Furthermore, PRP enhance the hemostatic response to injury and because of the high leukocyte concentration provides an antimicrobical effect [10]. Thus, once performing the plication of puborectalis muscle, the interposition of PRP gel fills dead spaces created by dissection and eliminates the possibility of fluid collections which may lead to failure. This consolidates the reconstruction of perineal body and supports the sphincteroplasty and we believe it is an important technical point in surgical treatment of traumatic cloaca.

In our experience, during the immediate postoperative period,

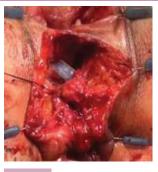


Figure 7 Overlapping sphincteroplasty.

there were no significant complications and after surgical followup of one month there was excellent healing of all wounds and after long-term follow-up of 6-12 months the patients reported



Figure 8 Bulbospongious muscle repair.

fully recovered flatus and fecal continence, good cosmetic result and significant improvement in terms of psychological status and sexual activity.

In conclusion, surgical treatment of traumatic cloaca achieves good functional and aesthetic results, is safe and present low rates of complications [3,5,8]. The reconstruction of perineal body anatomy may be challenging and complicated. Therefore, consult a specialist colorectal surgeon familiar with the various surgical techniques can improve the long-term results and the quality of life of these patients [4-9].



Figure 9 PRP gel interposizion.



Figure 11 Vertically skin closure.



Figure 10 Vaginal mucosa repaired

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