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CASE REPORT

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Traumatic Lesions of the Perineum – Case Report

Summary

A case of perineal trauma is reported. Such trauma accounts for only 0.05% of all trauma. Surgical correction should be accomplished when possible without resorting to routine protective colostomy.

(Keywords: Perineal trauma, colostomy)

Résumé

Un cas de traumatisme périnéal est ici rapporté. De telles blessures se retrouvent dans 0,05% de tous les traumatismes. Le traitement chirurgical devrait, si possible, se faire sans recourir à la colostomie de routine.

(Mots clés: Traumatisme périnéal, colostomie)

Resumen

Describimos el caso de un trauma perineal. Dicho trauma ocurre sólo el 0,05% de todos los traumatismos. Se es posible, debería realizarse una corrección quirúrgica sin recurrir a la protección rutinaria con colostomía.

(Palabras clave: Trauma perineal, colostomía)

Introduction

Perineal lesions are rare traumatic events which account to only 0.05% of cases.

At the beginning of the last century the mortality rate in these cases amounted to almost 90% because of early or late complications. Recent studies by British authors [6] on perineal trauma in the latest wars have reported a mortality of 14%. This confirms that the correct treatment of perineal lesions still presents great difficulties, in spite of modern resuscitation techniques.

If wars are excluded, lesions are mainly caused by injuries sustained at work or in road accidents. Most of the patients have polytraumatic injuries with many associated lesions of both parenchymal organs and skeleton.

The ease with which perineal trauma determines severe, widespread lesions of the organs of the perineal floor has been demonstrated by the fact that hyperabduction of the legs provokes tearing of all the pelvic muscles.

Pelvic fractures, lesions of the bladder, vagina, rectum, and ileal loops are often caused and provoke severe, continuous blood loss that must be stopped immediately.

Emergency surgery of polytraumatized patients should take account of recovery of vital functions, surgical haemostasis which can be difficult, colostomy and treatment of the associated fractures. Treatment of traumatic

perineal lesions is often delayed because of these priorities and this can give rise to late complications.

In our opinion emergency surgery should aim not only at management of the main resuscitation and surgical problems, but also at satisfactory repair of the perineal lesions in order to avoid untreated lesions causing permanent injury.

Trauma to the complex nervous and muscular system of the pelvic floor frequently determines severe damage and permanent injury and many authors believe that immediate surgical treatment of the sphincter apparatus is justified by the excellent results obtained.

Anorectal incontinence is common after severe perineal trauma. It can be partial when the internal and external sphincters are damaged with consequent leakage of liquid faeces or total when the puborectal muscle and/or pudendal nerve are damaged.

Section of the pubo-coccygeal, ileo-coccygeal and levator ani muscles cause prolapse and perineal hernia. Late repair of this complex muscular apparatus is made more difficult by the associated lesions and severe modifications of the scar tissue. In addition satisfactory physiological repair is hindered by the presence of abscesses and fistulas.

If the possibility of faecal communication is excluded colostomy does not safeguard the wound from exogenous or

endogenous bacterial contamination. Although laparotomy allows observation of the peritoneal cavity it represents yet another trauma.

Modern diagnostic techniques (echography, arteriography, CT) have reduced the need for emergency laparotomy. It should only be performed when bleeding and/or severe lesions of the endoperineal organs are present or when severe perineal damage cannot be repaired immediately.

We report on a polytraumatized patient who suffered severe perineal damage due to a traffic accident.

Case Report

A 26 year old male was admitted to the emergency department with multiple fractures of the arms and perineal trauma involving the pelvic muscles and bones. The accident had caused hyperabduction of the legs. This had caused marked diastasis of the pubic symphysis and a wound running from the anal margin to the scrotal region (Fig.1,2).



Fig.1: Marked diastasis of the pubic symphysis and wound from anal margin to the scrotal region



Fig.2: see Fig. 1

The muscles of the external and internal sphincter and the right anal levators were completely divided and the patient was suffering from blood loss.

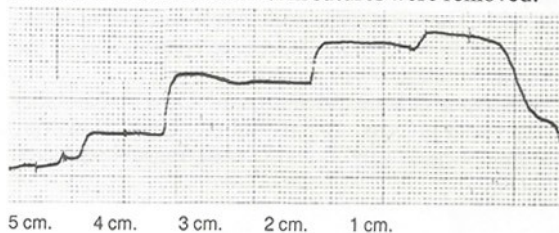
Peritoneal lavage and emergency echography revealed no intraperitoneal lesions and surgical repair was preferred to laparotomy. After haemostasis, careful evaluation and cleaning of the perineal wound, rectosigmoidoscopy was carried out. This revealed no lesions of the rectosigmoid wall. There was laceration of the anal canal from the skin margin to above the dentate line.

The internal and external sphincters were sutured and the severe diastasis was reduced in order to join the muscles of the levator ani. This permitted both muscles tissue repair and evaluation of the repaired anorectal angle. The proximal portion of the corpus cavernosum which had been partially separated was sutured along the midline.

A continuous drain was placed in the right ischiorectal fossa. Subcutaneous layers were sutured using an absorbable suture (Vicryl).

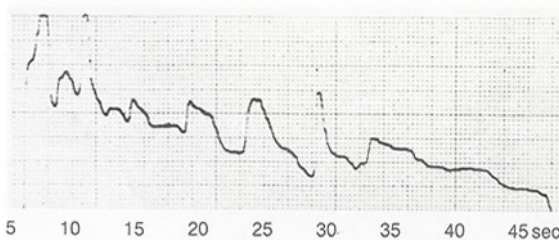
The diastasis of the symphysis was held firm with a plaster. In the postoperative period the patient complained of incontinence for gas and liquid stool and did not feel any solid faeces in the rectal ampulla. Bowel wash out was performed on the seventh postoperative day.

The skin wound was cleansed twice a day. It presented slight sepsis of the margins with negligible pus collection which drained after some skin sutures were removed.



Anal canal: resting tone and length
I = 15 cm H₂O

Fig.3a: Manometry results



Anal canal: Maximum voluntary contraction
(external sphincter pressure)
I = 15 cm H₂O

Fig.3b: Manometry results

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The patient was informed about the possibility of faecal incontinence and colostomy and was advised to perform sphincter contraction exercises.

Digital anorectal examination showed satisfactory conservation of the anorectal angle but low sphincter tone. Four weeks after surgery the patient had complete continence for gas and liquid stools. Regular bowel movement was maintained by bland laxatives and high fibre diet. The plaster was removed six weeks after the operation and manometry of the anal canal and proctogram were performed. Manometry was carried out using an urethral catheter (Fig.3) with a latex rubber balloon on the end (7 mm diameter) filled with water and linked to a three way valve with a Statham transducer and OTE CH3B polygraph. Basal pressure and maximum voluntary contractions were within normal limits, being 100 mm Hg and 120 mm Hg, respectively (normal basal pressure values 50 – 100 mm Hg; maximum voluntary contractions 60 – 120 mm Hg).

The anal canal was slightly lengthened (4 cm, compared with 2-3 cm in normal subjects). This could be due to the surgical reconstruction, whereas the satisfactory basal tone and pressure obtained by voluntary contractions demonstrated the perfect functioning of the internal sphincter (responsible for 70% of the basal tone) and the external and puborectal sphincters (voluntary contraction).

The proctogram (Fig. 4, 5) showed satisfactory conservation of the anorectal angle both at rest and during defaecation (angle of 155°) and adequate contractions of the perineal muscles.

Proctography demonstrated slight prolapse and mobility of the rectal mucosa after partial emptying. However, this did not cause alterations in faecal transit or defaecation (Fig.6).

Discussion

This case underlines that surgical treatment of perineal lesions should aim at immediate restoration of the anat-

omy and functioning of the perineal region when possible. Although laparotomy is indispensable in severe, irreparable lesions and advantageous in endoperineal rectal lesions and where the risks of infection are high, it should be used routinely. When there are less severe extraperitoneal lesions we believe that careful cleansing of the wound and immediate, thorough treatment can determine surgical healing and recovery of the compromised functions.

Immediate repair reduces risks of perirectal fat contamination and prevents tissue alteration and scars. We believe that the muscular exercise carried out by our patient helped to recover faecal continence.

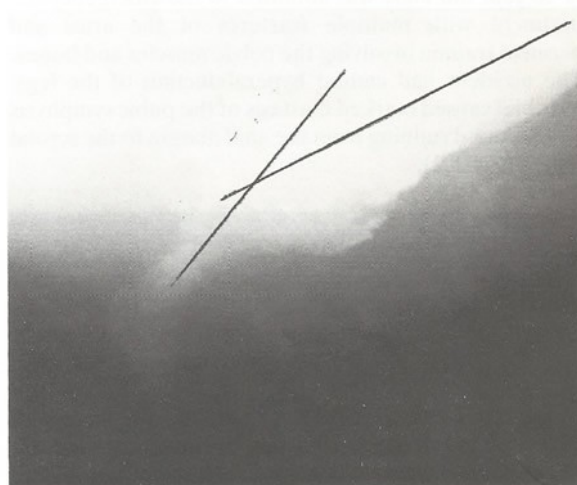


Fig.5: Anorectal angle during defaecation

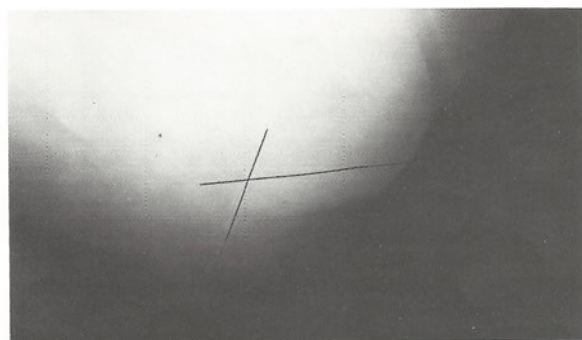


Fig.4: Proctogram showing conservation of anorectal angle at rest



Fig.6: Slight prolapse and mobility of the rectal mucosa after partial emptying without alterations in defaecation

Manometry performed six weeks after surgery revealed satisfactory recovery of the sphincter tone at rest and after voluntary contraction with values within normal limits.

Defaecography was carried out according to Mahieu and this dynamic and functional examination showed the patient's complete rehabilitation. It also showed alteration of the anorectal angle and partial prolapse of the rectal mucosa which had not caused defaecation malfunctioning.

Our results and those reported in the literature suggest that in cases of perineal lesions, especially in poly-traumatised patients, the surgical approach should be aimed at avoiding permanent incapacitating lesions.

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