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Fracture of the Penis: Surgical Management

MAMDOUH OSMAN, M.D.

The Urology Department, Theodore Bilharz Institute.

Abstract

Five cases of fracture penis have been treated in urology department in Hamad General Hospital, Qatar, between September 1990 and February 1993. All cases were immediately explored with repair of the tunica albuginea. Follow up for 2 to 17 months for all cases revealed excellent functional and morphological recovery. The different therapeutic modalities are discussed with a review of literature. Immediate surgical repair is our preference in these cases.

Introduction

FRACTURE of the penis is rarely mentioned in literature. It is defined as rupture of the tunica albuginea of one or both corpora cavemosa. Involvement of the corpus spongiosum and the urethra is reported [1]. The etiology is usually direct trauma to erect penis by forcible manipulations during coitus or masturbation. However, fractures due to trauma of flaccid penis are mentioned in literature [2]. Owing to the relatively few number of reported cases, no firm regimen for management of these cases could be established. Definitely, immediate surgical interference is recommended in most of literature yet, still there are many areas of dispute regarding pre and post operative management [3,4,5]. Conservative treatment of such cases has been associated with many complications such as curvatures, plaque formation and infection [5]. Herein we present our experience in five cases of fracture penis that were treated by immediate surgical interference. The preoperative investigations and post operative management together with follow up results are demonstrated.

Material, Methods and Results

In the period between September 1990 and February 1993, Five cases of fracture penis have been managed in Hamad Medical Corporation, Qatar. The patients age ranged between 28 years and 41 years (mean, 32, 6 years). Patients were seen within 4 to 13 hours from insult (mean 7,8 hours). The cause of trauma was sexual intercourse in one patient and forcible manipulations in the other four cases. All patients were expatriates and married but not accompanied by their wives.

Diagnosis in all cases was based on history of violent manipulations to the erect penis immediate detumescence and clinical assessment. All cases were submitted to immediate urethrogram to verify any asso-

ciated urethral lesions. No urethral involvement was detected in any case.

Immediate surgical exploration was done in all cases via a subcoronal circumferential (circumcision) incision with degloving of the penis, regardless of the site of the tear. Both corpora were involved in two cases. The tear in the tunica was at the base of the penis in four cases and at the midshaft in one case. The inferior surface was involved in only one case (Fig. 1).

The operation comprised complete evacuation of the hematoma, curettage of the involved area and repair of the gap in the tunica albuginea. The defects in the tunica were repaired with Vicryl 2/0 absorbable sutures in an interrupted mattress fashion. No urethral catheter was fixed whether pre or post operative. No antibiotics were given apart from an intraoperative single dose of aminoglucoside (160 mgm Gentamycin/IV).

Ice packs were used for the first postoperative 12 hours. One patient developed post operative retention of urine which was managed by insertion of a suprapubic catheter (cystocath 12F) for 48 hours. Otherwise, no postoperative complications were reported in our series. The hospital stay range was four to six days (average, 4.6 days).

Follow up for 3 to 17 months was available in all cases. All patients had normal penis on erection. Normal sexual activity was resumed in the five cases.

Fig.(1): Fracture penis

Fig.(1A): Pre operative: swelling and colouration of the penis with hematoma extending to infrapubic area.

Fig.(1B): Penis is degloved. The tear is involving the right corpora cavernosa with extension to the inferior surface.

Fig.(1C): Tear is repaired.

Fig.(1D): Postoperative. No catheter is left behind

Discussion

Penile fracture was first described by Malis in 1925 [6]. In a western literature review by Nicolaissen et al. in 1983, 110 cases were reported [5]. However, two geographic areas, namely the Far east and Gulf areas, seem to have a higher incidence of such injuries. Fujisu reviewed 208 cases of fracture penis in Japanese literature [7]. Fifty nine cases were reported in studies coming from the Gulf area [8,9,10]. The relative high incidence, in comparison to the small population, in the Gulf area reflects the social status in that community. All of our five patients were expatriates and married but not accompanied by their wives. Only one patient had his injury during coitus while the others sustained the injury as a result of forcible manipulations during masturbation.

Conservative treatment with ice pack, analgesics and antibiotics was the treatment of choice till the middle of this century [11]. Between 10% to 29% of patients treated in this manner had deformity of penis with difficulty and pain during coitus [4,5]. In 1971 Mars advocated immediate exploration and repair in cases of fracture penis [3]. This approach has the advantage of short hospital stay and much less chance of penile deformity. Our excellent result in five patients treated with immediate surgery goes along with other reports recommending surgical approach and reporting 100% success rate [5,12]. The average hospital stay in our series was 4.6 days.

Most of cases associated with urethral injuries occur during intercourse [13]. In our series no urethral injury was detected. We do agree with other authors [14] in recommending immediate ascending urethrogram in cases of fracture penis to exclude or confirm presence of urethral injury. However, the use of urethral catheter peroperatively to rule out urethral involvement [9] should be avoided. We do not recommend the use of urethral catheter in any case of fracture penis whether in pre or post operative period as it may induce infection or aggravate an already existing urethral contusion. Only one of our patients developed post operative retention and was managed by a suprapubic cystocath for 48 hours.

The diagnosis of fracture penis can be easily assumed on basis of typical history and clinical assessment. Apart from the ascending urethrogram, no other radiological assessment was done in our cases. Cavernosography [15], MR imaging [16] and US

[17] have been advocated for diagnosis of fracture penis and localization of the site of the tear. We feel that cavemosography is an invasive procedure that may induce infection while MRI will increase the cost of medical care with no real benefit. US may be helpful in complicated and neglected cases. Localization of the site of the tear preoperatively is only of academic interest as surgery in fracture penis is basically exploratory.

We used the circumferential subcoronal incision in all of our five cases. Most of authors advocate the fashioning of the incision according to the site of injury [5,10,12]. Accordingly they use longitudinal or curved [18] incisions for basal tears and confine subcoronal incision for distal tears. We do believe that surgery in fracture penis should be an exploration one and this is best achieved via a subcoronal incision with degloving of the penis. Besides, incising directly over the site of injury with the presence of hematoma and anatomical disruption will limit the surgical orientation with possibility of injuring the neurovascular bundle. Tourniquet at the base of the penis was routinely used in our cases.

The use of postoperative sedatives and/or stilbesterol to suppress penile erection was recommended by many investigators [14], however we do not think that they are necessary. It was our experience that post operative erections were few and limited by the pain so can hardly cause any complications. Besides, postoperative bouts of erection improve the patients moral as they decrease his worries about the sequelae of the injury.

In summary, fracture penis is a rare injury. Ascending urethrogram should be done in all cases to exclude urethral involvement. Immediate surgical exploration and repair of tunical tear is the treatment of choice. We recommend the use of subcoronal cicumferential incision in all cases. In our experience, the routine use of post operative antibiotics or stilbesterol is not necessary. Long term follow up in surgically treated cases of fracture penis, demonstrates excellent cosmetic and functional results.

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