

# Penile Fracture: Role of Early Surgical Intervention on Postoperative Outcome

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### ABSTRACT

Fracture of penis is relatively uncommon but grave urological emergency, which needs urgent surgical intervention to achieve good postoperative outcome.

**Objective:** To determine the outcome of early surgical repair in patients presenting with fracture of penis. **Patients & Methods:** This retrospective study comprises 13 patients with fracture of penis, presenting in emergency of Services Hospital, Lahore from 2000-2007. Diagnosis was made clinically. No radiological investigation was carried out. All patients had primary suturing of the tunica tear and were followed up for 2-6 months postoperatively. **Results:** Mean time interval between accident and arrival to hospital was

recorded. Eight patients (61.5%) had fracture due to sexual intercourse. Three patients (23.08%) bending of penis. Masturbation and fall on to an erect penis each accounted for 1 (7.70%) of the total cases. There were no significant complications except necrosis of penile skin in one patient. Erectile function was preserved in all patients postoperatively. **Conclusion:** Early surgical intervention for penile fracture has good postoperative outcome with acceptable complication rate. Early diagnosis and surgical repair are instrumental in ensuring good outcome and minimal complications.

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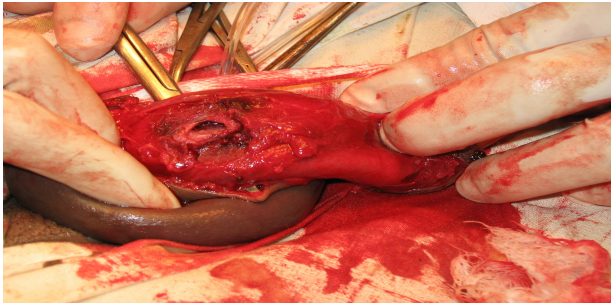
### INTRODUCTION

Penile fracture is a rare but grave emergency. Improper treatment can result in deviation of penis and erectile dysfunction. Mali first described traumatic rupture of the corpus cavernosum in 1925<sup>1</sup>. Fracture of penis is a condition where excessive force applied to the long axis of penis in the erect state, results in rupture of the tunica albuginea of the corpus cavernosum. Tunica albuginea which is of 2mm thick during flaccidity become as thin as 0.25-0.5 mm during erection and is over stretched by sudden increase in intracorporeal pressure.<sup>2</sup> Common causes are sexual intercourse, masturbation, manipulation and rolling over on an erect-penis<sup>3</sup>. Penile fracture may also occur after caudal deflection to interrupt or hide an involuntary erection.<sup>4</sup> Diagnosis is usually clinical. Imaging techniques include Ultrasonography, MRI or special test cavernosography<sup>2,5,6&7</sup>. Injection of methylene blue preoperatively may be used to localize the site of fracture, particularly if the tear is small one or there are multiple tears. Urethrography<sup>4,8</sup> may be done if urethral injury (Hematuria or voiding

difficulty) is suspected. Fracture penis is an emergency and time should not be wasted on investigation.

### PATIENTS & METHODS

Record of patients with penile fracture was analyzed retrospectively from 2000-2007. Diagnosis was made on the basis of history and clinical examination in all patients. Routine blood and urine examination was also carried out. Ultrasonography and cavernosography were not done. Urethrogram was done only if there was suspicion of urethral injury. Patients were prepared for general anesthesia and antibiotics were instituted pre and post operatively. Circumferential 1cm proximal to the coronal sulcus incision was made, penis was degloved and haematoma evacuated Fig.1 (tear in corpora cavernosa)



Rent in tunica albugenia was identified. Rent was closed with vicryl 0 continuous sutures and skin was repositioned with vicryl 4/0. Compression bandage was applied for 24 hours. Patients were catheterized with 16 Fr Foley catheter during surgery to prevent an inadvertent injury to urethra and removed on second postoperative day. Patients were followed up fortnightly for two months then monthly for four months. Detailed clinical examination was done on each visit to assess wound infection, skin gangrene, penile deformity, erectile dysfunction, and difficulty in coitus.

## RESULTS

Thirteen cases of penile fracture were treated at department of urology SIMS/ Services Hospital Lahore from 2000-2006. Time interval between accident and arrival to the hospital was 3 to 36 hours (Mean 19 hours). Patients were admitted in emergency. Etiological factor were sexual intercourse 8 cases (61.54%) bending of penis 3 cases (23.08%), masturbation one case (7.70%) and fall on to an erect penis one patient (7.70%). Most of the patients heard a characteristic "cracking sound" during intercourse followed by immediate loss of erection along with severe pain and swelling of penis (egg plant deformity). Fig.2

**Figure-1**  
**Egg Plant Deformity**



All patients had a swollen, bruised penis, tender on

palpation. Fracture site was not palpable in any patient. All patients underwent surgical repair. There were no significant complications except necrosis of penile skin for which he was referred to plastic surgery department for skin grafting. Mean hospital stay was 3 days.

## DISCUSSION

Coitus, although pleasurable, may be risky<sup>9</sup>. In fracture penis early surgical repair is recommended by WHO.<sup>1</sup> The delay in reporting to hospital in international and our study is due to embarrassment. Diagnosis is usually made from history and physical examination. Diagnostic imaging studies are usually not required as surgery is warranted if diagnostic cavernosography or MRI findings are equivocal. More over cavernosography causes fibrosis and infection. Radiological investigations are expensive and may delay treatment<sup>10</sup>. Conservative management has been practiced in the past and has proved effective in early stages, however the incidence of erectile dysfunction is high in the long term follow up. As the development of the erectile dysfunction after tunica albaginea injury may take more than a year because of the development of site-specific veno-occlusive dysfunction.<sup>12-13</sup> Other complications associated with conservative treatment are painful erection, difficulty in coitus and penile deformity. Penile fracture can be repaired under local anesthesia by making 2cm longitudinal incision directly over the identified defect in the cavernosum but it does not afford complete evaluation of both the corpora cavernosa and the corpus spongiosum<sup>14</sup> while circumferential degloving incision begins 1cm proximal to the coronal sulcus affords excellent exposure. Pain during coitus was the major complaint in patients who underwent surgery more than 48 hours after injury<sup>4</sup>. Absorbable sutures should be used for repair<sup>15</sup>, non absorbable sutures may cause painful palpable suture knots and should be avoided<sup>16</sup>. No medication is used for prevention of erection because pain during erection prevents penile tumescence. Sexual intercourse and masturbation must be avoided for 6-8 weeks after the repair to prevent haematoma formation around sutured wound.<sup>8</sup> Large haematoma leads to weak scar which is prone to refracture<sup>17</sup>. The public should also be educated to seek medical attention immediately, as delay or failure in treatment results in physical and

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psychological disabilities<sup>3</sup>. We recommend immediate surgery in the presence of evident physical signs of major hemorrhage and penile deformity as in these conditions a corporeal albuginea tear is present in almost 100% of patients as only rarely rupture of deep dorsal vans of penis mimics this deformity. Early surgical intervention gives good results and less morbidity.

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