

Penile Fracture : Long-Term Outcome of Treatment

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Abstract

Objective : Penile fracture is a rare injury, usually resulting from direct trauma to the erect penis during sexual intercourse. Immediate surgical treatment is the basis for the treatment of this injury due to the high rate of complications associated with delayed management. The aim of this study was to evaluate the clinical presentations, diagnostic methods, and outcomes of the treatment.

Material and Method : We retrospectively studied patients with penile fracture treated at Ramathibodi Hospital from 1975 to 2000. Clinical presentation, diagnostic methods, technique of treatment and outcomes of treatment were noted.

Results : Twelve patients were found in this study. The mean patient age was 32 years old (range 19-42). The interval from time of injury to presentation was 3-48 hours. Of these patients 10 had been injured during sexual intercourse (83%) while 2 had been injured during masturbation. All patients presented with a very suggestive clinical picture (pain, detumescence and hematoma). No further investigation was needed for confirming the diagnosis. One case had urethral bleeding, therefore, retrograde urethrography was performed but no extravasation of contrast media was noted. All patients were treated by immediate surgery, through a circular subcoronal incision and degloving of the penis to allow a thorough exploration. All of the patients had a tunica albuginea tear that was promptly repaired. No associated urethral laceration was noted. All of the patients did very well after surgery and two had mild curvature, which had not hindered intercourse at follow-up (mean time of 24 months).

Conclusions : Penile fracture has very typical clinical signs and no further investigation is usually needed. Early surgical treatment is associated with a low incidence of late complications.

Key word : Penis, Trauma, Corpus Cavernosum, Tunica Albuginea Rupture

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Penile fracture constitutes a rare urologic emergency and is defined as rupture of the corpus cavernosum and its surrounding fibroelastic sheath, the tunica albuginea⁽¹⁾. Penile fracture is caused by a sudden increase in intracorporeal pressure due to an external force tearing the thinned tunica albuginea of the erect penis⁽²⁾. Common causes of injury include sexual intercourse, non physiologic bending of the penis during self-manipulation, rolling over in a bed with an erect penis, and direct injury to the penis⁽¹⁾. Operative treatment, with repair of the torn tunica albuginea is the treatment of choice for this rare entity^(1,2). However, non-operative treatment was reported for some selected cases⁽³⁾. The aim of this study was to determine early results, complications and long-term outcomes of penile fracture treated at our hospital.

MATERIAL AND METHOD

All the medical records of patients with penile fracture treated at the Division of Urology, Department of Surgery, Ramathibodi Hospital from 1975 to 2000 were reviewed. The causes of injury, clinical presentation, technique of treatment, complications and outcomes were identified. The follow-up time ranged from 8-38 months (mean 24 months).

RESULTS

Twelve patients were found in this study with the mean age of 32 years old (range 19-42). The interval from time of injury to the emergency room

was 3-48 hours (mean 6.8 hours). Ten patients (83%) had been injured during sexual intercourse while two cases had been injured during masturbation. All of the patients presented with sudden pain at the penis, detumescence and hematoma at the penile shaft. Due to a very suggestive clinical picture, no further investigation was done for confirming the diagnosis. One case had urethral bleeding, therefore retrograde urethrography was performed and showed no leakage of contrast media. Regarding treatment, all of the patients were treated by immediate surgery. A circular subcoronal incision, degloving of the penis, extensive exploration at the hematoma until exposure of the torn tunica albuginea was done. All of the patients had a tunica albuginea tear that was promptly repaired. No associated urethral laceration was found, and no immediate complication was noted. All of the patients recovered very well with recovery of erectile function within 2 weeks post-operatively. In the long-term follow-up at the mean time of 24 months (range 8-38), they could still have full erection. Two cases had mild curvature but it did not hinder intercourse.

DISCUSSION

Penile fracture is a rare but serious urologic condition that usually requires surgical repair^(1,2). It is defined as rupture of the corpus cavernosum and its surrounding fibroelastic sheath, the tunica albuginea⁽²⁾. Penile fracture is caused by a sudden increase in intracorporeal pressure due to an

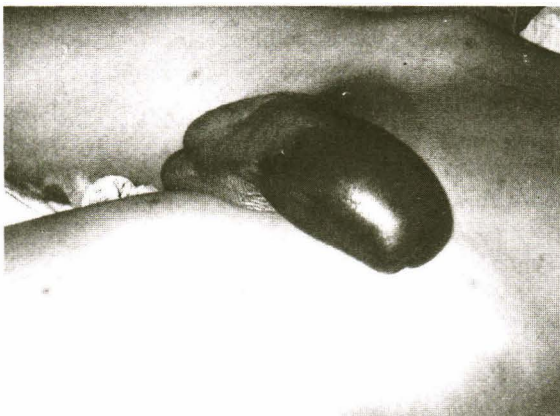


Fig. 1. Shows penile fracture. Penile swelling with hematoma is also shown.



Fig. 2. Shows rupture of the corpus cavernosum in the same case as Fig. 1.

external force tearing the thinned tunica albuginea of the erect penis^(1,2). Common causes of injury include sexual intercourse, nonphysiologic bending of the penis during self-manipulation, rolling over in bed with an erect penis, and direct injury to the penis⁽²⁾. The most common cause is vaginal intercourse⁽⁴⁾. The present study revealed 83 per cent of cases injured during sexual intercourse which is consistent with other results. The tunica albuginea thins from 2 mm to 0.5-0.25 mm during erection. Because the thinned tunica albuginea is susceptible to injury, a sudden, direct force acting on the dorsum can often lead to fracture⁽⁵⁾. In most cases, a tear occurs in only one of the corpora cavernosa and its surrounding tunica albuginea. However, the corpus spongiosum and urethra can be involved⁽⁶⁾. The clinical manifestations include an audible crack, sudden onset of pain, immediate loss of erection, rapid swelling, widespread ecchymosis with hematoma, and deviation toward the side opposite the injury⁽⁷⁾. The fracture usually occurs unilaterally in the dorsal two-thirds of the penis and typically involves less than one-half of the cavernosal circumference⁽⁷⁾. Penile fracture can easily be diagnosed in patients with a typical history and physical exami-

nation findings⁽⁷⁾. Doppler ultrasonography, cavernosography or MRI can be used for confirming the diagnosis in non-typical cases⁽⁸⁻¹⁰⁾. Although successful conservative treatment of penile fracture has been reported⁽³⁾, recent studies have demonstrated the clear advantage of early surgical intervention⁽¹¹⁾. The goals of surgical exploration are evacuation of hematoma and primary repair of tunica albuginea⁽¹²⁾. Early surgical treatment can prevent late complications such as fibrous plaque formation and angulation, thereby reducing the time of convalescence. Late complications in delayed treatment include penile aneurysm, induration, penile curvature, and erectile dysfunction^(12,13). Our study also showed low complication as well as long-term consequences after early surgical treatment of penile fracture. In general, surgery is recommended in all patients with suspected of penile fracture.

SUMMARY

Penile fracture has very typical signs, is easy to diagnose and no further investigation is usually needed. Early surgical exploration, repairing of torn tunica albuginea was recommended and showed a low incidence of complications.

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องคชาตหัก : ผลการรักษาในระยะยาว

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วัตถุประสงค์ : องคชาตหักพบได้ไม่บ่อยนัก สาเหตุเกิดจากการกระแทกโดยตรงที่องคชาต ซึ่งเกิดจากการร่วมเพศเกือบทั้งหมด การรักษาที่เป็นที่ยอมรับกันคือการผ่าตัดเร่งด่วนซึ่งผลของการรักษาจะได้ผลดีกว่าการรักษาที่กระทำไม่ทันที่ทั้งที่การศึกษานี้เพื่อศึกษาถึงอาการ อาการแสดง การสืบค้น การรักษา ผลของการรักษาขององคชาตหัก

วัสดุและวิธีการ : ศึกษาย้อนหลังผู้ป่วยที่มาได้รับการรักษาด้วยเรื่ององคชาตหัก ที่หน่วยศัลยศาสตร์ระบบปัสสาวะ โรงพยาบาลรามธิบดี ระหว่าง พ.ศ. 2518-2543

ผลการศึกษา : มีผู้ป่วยทั้งสิ้น 12 ราย อายุเฉลี่ย 32 ปี (19-42) ระยะเวลาตั้งแต่เกิดเหตุจนกระทั่งมาถึงห้องฉุกเฉินใช้เวลา 3-48 ชั่วโมง ผู้ป่วย 10 ราย (ร้อยละ 83) เกิดเหตุขณะร่วมเพศ อีก 2 รายเกิดเหตุขณะสำเร็จความใคร่ด้วยตนเอง ทุกรายมีอาการปวด มีเลือดคั่งใต้ผิวหนังขององคชาต และองคชาตอ่อนตัวลงทันที ผู้ป่วยทั้งหมดมีอาการและอาการแสดงที่ชัดเจนจึงไม่ต้องอาศัยการสืบค้นต่อ แต่มีผู้ป่วย 1 รายที่มีเลือดออกทางหลอดปัสสาวะด้วยจึงได้รับการฉีดสารทึบรังสีเข้าหลอดปัสสาวะแต่ไม่พบความผิดปกติ ทุกรายได้รับการผ่าตัดฉุกเฉินโดยลงแผลผ่าตัดควั่นรอบองคชาตละหนึ่งหุ้มปอกลงมาถึงโคนและเย็บซ่อม tunica albuginea ไม่พบว่าผู้ป่วยรายใดมีหลอดปัสสาวะฉีกขาดร่วมด้วย เมื่อติดตามผู้ป่วยเฉลี่ย 24 เดือนพบว่าทุกรายผลการรักษาดี มีสมรรถภาพทางเพศและร่วมเพศได้ มีเพียง 2 รายที่องคชาตงอเวลาแข็งตัวแต่ยังสามารถร่วมเพศได้

สรุป : องคชาตหักมีลักษณะของอาการและการตรวจพบที่ค่อนข้างชัดเจน มีบางรายเท่านั้นที่อาจจะต้องอาศัยการสืบค้น หากเราสามารถทำการรักษาได้เร็วผลของการรักษาจะได้ผลดี

คำสำคัญ : องคชาตหัก, อุบัติเหตุต่อองคชาต

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