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PENILE FRACTURE AT LAUTECH TEACHING HOSPITAL, OSOGBO

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ABSTRACT
Background/Objective: We have seen three cases of penile fracture presenting in diverse ways in our teaching hospital. We want to highlight the difficulties of management when patients present late.

Patients and Methods: Three case reports of young men whose ages range between 22-32 years and who presented at 1year 6 months, four weeks, and 3 hours respectively, following penile fracture.

Results: The patient that presented within 3hours had immediate exploration and primary repair with good results while the one that presented after four weeks is still being followed up. The patient that presented very late has been lost to follow up after he was told that he would require surgery.

Conclusion: Early surgical intervention in penile trauma still gives the best result and is hereby advocated. Decision to operate or not should also be based on the empirical finding of size of tear if there is no associated urethra injury.

Key Words: Penile fracture, tunica albuginea, injury, surgery *(Accepted 25 February 2008)*

INTRODUCTION
Penile fracture is an unusual clinical entity whose incidence was estimated to be 1 of 175,000 hospital admissions [1]. It occurs when the tunica albuginea of the corpus carvenosum of an erect penis ruptures[1.] This has been considered as a rare coital emergency that requires urgent attention to avoid potential complications.[2] The injury has always been classified as either simple or complex. Where there is associated urethra injury, it is described as complex[3]. Common aetiological causes include vigorous sexual 'athletism'; rape, penile manipulations during masturbation for stimulating sexual pleasure and turning over in bed while asleep[4].
We are reporting these cases seen at LAUTECH, Osogbo; mode of presentation, diagnosis and management; and review of literature.

CASE REPORTS
Case 1: HO, a 32 year old school teacher presented in the Urology Clinic of LAUTECH Teaching Hospital in June 2002 with 1 year 6 months history of excessive right curvature of his penis on erection associated with inability to penetrate his fiancee during intercourse. He was otherwise alright prior to hearing a “cracking” sound one night during the act of sexual intercourse with his girlfriend of about 3 years courtship. This was followed by loss of erection and progressive penile swelling. There was no associated bleeding per urethra. Except for pain, he was able to micturate afterwards without any problem. For lack of knowledge of what to do and shame at presenting at a hospital late in the night, he just took analgesics and antibiotics on his own.Over the days, the pain and swelling subsided and he thought all was well till a few months later when he wanted to resume sexual activities and discovered that his penis could not penetrate his fiancée's vagina at intercourse. He sought medical advise when the girlfriend threatened to leave him. On clinical examination, he was a young man, not ill-looking but appeared anxious and worried. System review and examinations were essentially normal. Local examination of the genitourinary system showed normal sized but flabby phallus. There was a 1.5cm long transverse palpable gap or defect of the right tunica albuginea about 5cm from the peno-scrotal junction. Investigations done included: Full blood count, Heamoglobin Electrophoresis, Urinalysis, Urine Microscopy, Culture and Sensitivity. Penile Ultrasound planned could not be done because the facility was not available then. The planned surgery-Z repair of the torn tunica albuginea was not done as the patient was lost to follow up.

Case 2: A 26 year old undergraduate of a tertiary institution in Lagos, Nigeria, who complained to a 500 Level medical student friend of our institution, presented with 4 weeks history of penile pain and swelling following a cracking sound heard early one morning while trying to fondle with his erect penis.

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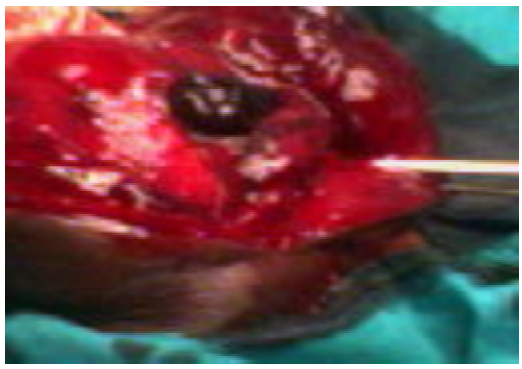
There was sudden pain and progressive swelling. No associated bloody urethral discharge and he was able to void urine without difficulty. He subsequently presented at a private clinic in Lagos where he was given analgesic tablets and undisclosed antibiotics. The swelling was on the right side of his phallus. Clinical examination showed a young man who was generally healthy looking. Local examination of the external genitalia showed a normal phallus with a hard freely mobile mass in the right postero-lateral aspect of the mid-penile shaft (positive rolling sign). The mass was non-tender. Blood and Urine investigations were normal while penile Ultrasound confirmed calcified heamatoma of the swelling. He was followed up weekly for about 6 weeks, during which no chordae was noticed and he maintained that he was having normal erection, even though he has not tried sexual intercourse. He is still being followed up.

Case 3 : K .A, A 22 years old single Nigerian who presented in our unit with history of sudden on set of severe pain and progressive swelling of the penile shaft of 3 hours duration. The pain was heralded by a "burst" sensation on the penile shaft following a turning over from the left lateral to right lateral side on the bed while asleep with nocturnal penile erection. The burst sensation was then followed with sudden detumiscence. Examination revealed an anxious young man with normal vital signs. Local examination of the genitourinary system showed a swollen, flaccid curved penis with brownish discoloration and angulation of the mid-shaft of the penis to the left. (Fig 1) There was no blood on his external meatus and both testes and scrotum were normal. He had analgesics (pentazocine) to alleviate his serious distress. He was catherized. He had emergency penile exploration through a circumferential sub-coronal incision. There was a 2cm rent in the tunica albuginea and the Buck's fascia at the level of the mid-shaft of the penis on the right corpus carvenous with haematoma dissecting the subcutaneous tissue plane up to the coronal (Fig2). He had clot evacuation, copious irrigation, and repair of the rent in the tunica albuginea of the right corpus cavenosus and the Buck's fascia with 3/0 chromic catgut interrupted sutures. The left corpus cavenosus, the corpus spongiosum and the urethra were normal. The overlaying skin was closed with 3/0 nylon. Post operative condition was uneventful and the patient was discharged after removal of skin sutures 1 week after surgery. He was counseled to refrain from sexual intercourse for four weeks after surgery. He has remained well with normal and satisfactory erection since discharge. At the last clinic follow-up he showed desire to resume sexual activities and told us that he might be traveling abroad for further studies.

Figure 1: **Depicts the Typical Swelling, Brownish Discolouration of the Distal 1/3 and Angulation of the Fractured Penis**.

Figure 2: **Depicts the Blood Clot Lying over the turn Tunica Albuginea which later gives the "Rolling Sign" 10days to 2 Weeks after Calcification.**



DISCUSSION

The first description of penile fracture in man was by an Arab Physician Abdulkasem, in Carboda over a Century ago[5]. As relatively uncommon clinical entity, about 1642 cases have been reported from several countries up to date. [4] These are particulary from European and Asian countries [6, 7]. Unfortunately as there are very few reports from Africa [7, 8] it is worthy, therefore, to report our three cases within 3 years. Penile fracture results from rupture of the tunica albuginea of the corpus cavenosus of an erect penis[1]. Normally, a flaccid penis becomes erect on emotional or sensual/sexual stimulation and the usually thick tunica becomes very thin (from about 0.5-.5cm); thus prone to fracture [1,2,5,9]. Sudden angulations or compression of the erect penile shaft results in an increase in the intra-cavenosus pressure to a level that would exceed the tunica tensile strength resulting in its rupture. It is because this sort of angulation is a common feature in coitus- erect, reverse (woman on top), masturbation or nocturnal unconscious penile manipulation that makes the patient prone to fracture[2, 4, 9]. The ages of our patients were between 22-32years. This is in agreement with the reported cases of 21-38 years by Dincel et al[9]. Our case 3 is a 22 years Polytechnic student, sexually active and who found

Our six weeks ban on sex quite disturbing.Diagnosis of penile fracture is clinical in most cases whether they present early as in case 3 or very late as in case 1. The history is quite typical: hearing of "cracking sound" in an erect penis with associated sudden pain and immediate detumescence during intercourse. In fresh case that present early, clinical examination will show swelling, bruising and deviation (angulation) of the penis as first described by Anbergina[1,2]. Where clinical diagnosis is in doubt, penile ultrasonography (echo tomography) [2] is cheap and non-invasive, carvenosography or penile Magnetic Resonance Imaging (MRI) would demonstrate a tear in the tunica albuginea, dissecting haematoma in the penile tissue as useful adjuncts in diagnosis[2]. As MRI is not available in our practice as well as most developing world, a high index of suspicion that will necessitate surgical exploration and closure of the tear is advised, particularly when the patient presents early. All our three cases had the rupture on the right and are all right handed. It might be interesting to look for any association between side of penile fracture and cerebral dominance in future.Our second case was managed conservatively, having presented beyond two weeks after injury while the planned surgery for case 1 is yet to be done because the patient is lost to follow up possibly because he could not comprehend "surgery on his phallus" Generally, however, conservative approach should consist of administration of analgesics with sedation to alleviate anxiety. Application of cold compress to the fractured penis should be done; use of anti inflammatory, antibiotics, antiandrogens (Stillbesterol); use of fibrinolytics and, finally rest from sexual activities for a varying period, have been suggested and practiced in simple fracture or minor tear[2]. This conservative mode of treatment with catherization was reported to result in 90% resolution with normal function and without deformity by Farah et al [1] However, as this may be followed by penile curvature during sex, difficulty with penetration, with resultant erectile dysfunction as in case1, it will be pertinent to explain all these to the patient who presents late or prefers to have conservative treatment. Urethral injury is reported to be associated with penile fracture in 10-38% of cases[1,2]. This referred to as complex fracture, requires early surgical exploration and repair of the associated large rent in the corpora to avoid penile chordee from fibrosis, erectile dysfunction and urethral stricture[2]. Simple penile fracture with tear less than 1cm as demonstrated by penile USS/MRI and who presented late may be managed conservatively. When to return to sexual activities can be a serious border to the young and activemales. Patients with simple fractures may be advised to Resume within four weeks as suggested by Shittu etal [11], while complex fractures should be advised to wait for a longer period to prevent recurrence or repeated Injury of an unstable repair[2] and allow sound urethral healing.

CONCLUSION

Penile fracture is a rare or under reported clinical urologic entity. As common aetiological factors include over-enthusiastic sexual intercourse, masturbation and very rarely, turning over in bed, high index of suspicion is the hallmark of taking decision for early exploration and repair of tear especially if the tear is more then 1.5cm. We are also proposing that classification of penile fracture be modified to include size of tear which will be a reflection of the degree of trauma and a determinant factor in decision to operate early or not.

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