

# Penile fracture in a patient with stuttering priapism

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## Summary

**Penile fracture commonly results from trauma of sexual intercourse or masturbation. It is common in the Middle East and America, but rare in Nigeria and sub-Sahara Africa.**

**We present a case of penile fracture, an uncommon urologic emergency, complicating priapism, another urologic emergency; precipitated in an unusual circumstance. This report illustrates a 30-year-old undergraduate who has suffered stuttering priapism for about a week and developed penile fracture while forcefully packing the erect organ. He presented early in the hospital and had emergency surgical repair. Prognosis was good. A review of literature is also presented.**

**Immediate surgical repair offers good prognosis in the management of this emergency.**

**Key words: Penile fracture, Penile bending, Stuttering priapism, Non-sickler and Primary repair.**

## Résumé

Une fracture de penile le plus souvent consequences de traumatisme des rapports sexuels ou masturbation onanisme. Elle est plus courant au Moyen Orient et en Amerique mais rare au Nigeria et en Afrique sous sahara. Nous présentons un cas d'une fracture de pénile, une urologie d'urgence peu commun priapism douloureux ou de complications, un autre urologie; precipite a des circonstances peu ordinaire. Ce rapport illustre le cas d'un étudiant âgé de 30 ans qui était frappé d'une maladie begaiement priapism pendant une semaine et il est atteint d'une fracture de pénile pendant qu'il était en train d'empaquer l'erection penienne avec la force. Il s'était présenté tres tôt a l'hôpital et subi une intervention chirurgicale d'urgence. La prognose était bonne. On a également donné un bilan de la litterature. L'intervention chirurgicale d'urgence a donné une bonne prognose dans la prise en charge de cette urgence.

## Introduction

Fracture of the penis is a rare urological emergency seen commonly in sexually active young adults, often in the age range 18 - 38 yrs.<sup>1-3</sup> This condition usually results from trauma to erect penis, and most cases reported in literature follows coital accidents due to over enthusiastic sexual manoeuvres or forced manipulation of erect penis during masturbation.<sup>3,4</sup> Other causes include self-inflicted mutilation in psychiatric patient or accidental fall over an erect penis.<sup>1,3,5-7</sup> Most cases are reported in the Mediterranean and the Middle East countries, though the highest incidence is in the North America.<sup>8</sup> Penile fracture is relatively uncommon in Nigeria and sub-Sahara African Countries.<sup>8</sup> In Nigeria, literature review indicates that Mbonu and Aghaji in 1992 reported 8 cases at Enugu in the east,<sup>9</sup> while Ugwu et al<sup>10</sup> also reported

a case in Jos Peninsula in 1998. In southwestern Nigeria, Shittu and Kamara in the year 2000 also reported few cases managed at Ibadan.<sup>11</sup> In our hospital, this was the first case of penile fracture seen in over three decades of its existence, and to our knowledge, this is the first reported case of penile fracture to be associated with stuttering priapism in Nigeria.

## Case report

Mr. F. O. a 30-year-old undergraduate student of the Obafemi Awolowo University (OAU), was referred to the emergency department of the OAU teaching hospital complex on the 21<sup>st</sup> of February, 2001 with 1½ hr history of sudden penile swelling which followed a snap while packing his prolonged erected penis inside his underwear to achieve detumescence, as he was hurriedly preparing to go for lecture. Few days before the incidence, he has been having recurrent prolonged erections without sexual urge lasting many hours (stuttering priapism), which was successfully relieved manually by bending the penis and packing it inside his underwear. There was no associated bleeding per urethra and no difficulty on micturition. He has not indulged in habitual masturbation, and he is neither a psychiatric nor sickle cell patient (has Haemoglobin-AA genotype).

On examination the penis was oedematous and tender with a round erythematous, fluctuant swelling on the right side of the mid-shaft. Palpation over the dorsum of the right corpus cavernosum revealed discontinuity with a small gap in the mid-shaft, at the site of the swelling. The left corpus cavernosum and the spongiosum were not affected. There was no blood on the external urethral meatus. Diagnosis of penile fracture was made and the patient had emergency exploration 12 hours later.

At surgery, about 2.5cm transverse incision was made over the swelling at the fracture site, and findings include grossly oedematous penis, intact dartos and the buck fasciae, transverse tear on the right side of the tunica albuginea, approximately 25cc haematoma which was largely extra tunica with minimal extension to the right corpus cavernosum, and almost completely transected right corpus cavernosum, with the two ends held together medially by a thin rim of tissue of about 4mm (about 10% of the circumference). The haematoma was evacuated; wound irrigated with normal saline to dislodge blood clot and the corpus cavernosum was repaired end to end with interrupted 3/0 vicryl suture. The tear in the tunica albuginea was then repaired and the wound was closed back in layers, with subcuticular skin closure. Oedema subsided fully by the third postoperative day, and the same day he started having recurrent strong erections, which was controlled successfully with diazepam. He was discharged home on sedatives on the fourth postoperative day with an instruction to abstain from sex for at least a period of 3 months. Against medical advice, patient started having normal sex

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five days after discharge from the hospital. Fortunately, there was normal wound healing. He was lost to follow up after six months. Throughout the period of follow up, he had strong painless erection and there was no plaque, no penile curvature, no fistula formation and no voiding difficulty.

## Discussion

This report illustrates a case of stuttering priapism in a non-sickler, a condition which otherwise is known to occur exclusively in patients with sickle cell disease. It also illustrates that priapism can be complicated by fracture following direct trauma to the penis, no matter how trivial. The good result obtained from the repair in this patient also confirms the effectiveness of proper surgical repair for this condition, which is believed to be effective by most authors.<sup>3, 5, 6, 12-15</sup> It also indicates that simple repair without microsurgical exploration of the cavernosal artery is effective as advocated by Gontero P et al<sup>16</sup>

This condition is common in young adults, in the sexually active age group 21 - 38 years, which closely reflects the aetiology of this condition. Most cases are unilateral, but it can rarely be bilateral.<sup>7,16</sup> Tricoporeal fracture is said to occur when the injury involves the two corporal cavernosa and the spongiosum. It is simple when the skin remained intact and compound when there is skin or urethral involvement. World wide, most cases result from trauma of sexual intercourse and manipulation during masturbation. The patient under discussion has no sexual urge during the incidence; he was only a victim of stuttering priapism regularly held hostage every morning for over a week in his room because of penile erection. The need for him to go to classroom for lecture has been compelling him to forcefully bend and pack the erected organ inside his underwear, which resulted into fracture on that day. This event is an unusual cause of penile fracture.

As witnessed in this case, most cases of penile fracture occurs on the right side and this was postulated to be due to anatomical weakness on the right side.<sup>9</sup> Mechanism of injury in this case however indicates that the direction of penile bending will have influence on the side that is affected.

The tunica albuginea is a strong fascia investment of the penis, which helps in part to confer rigidity to an erect penis. Fracture of the penis occurs following tears in the tunica albuginea, which can easily occur when the tunica is flattened out, thin and relatively inelastic during erection such that with slight trauma the rigid corpus cavernosa becomes prone to rupture.<sup>17</sup> It has been postulated that rupture occurs when the intravernosal pressure exceeds 1500mmHg.<sup>18</sup> Following rupture there is leakage of blood from the cavernous tissue with haematoma formation and subsequently oedema distally.<sup>19</sup> The gross oedema noticed at surgery involved the penis distal to the site of fracture especially on the affected side. This was due to the venous obstruction by the haematoma. The initial few hours of delay before surgical intervention, contributed to the extent of the oedema.

Colour doppler ultrasound assists greatly in making the diagnosis<sup>4</sup>

The repair in this patient was carried out with a small

transverse incision at the fractured site, which offered adequate exposure and good cosmetic appearance in this case. Some authors also advocate degloving sub-coronal, semi circumferential and longitudinal incisions.<sup>1,7</sup> Incisions commonly adopted are matter of preference and should be weighed against the background of adequacy of exposure, cosmetic appearance and possible complications.<sup>1, 7, 10, 20</sup> In this patient, the haematoma was evacuated, fractured ends of the corpus cavernosum were flushed irrigated with normal saline to rid it to blood clot and then sutured end to end, and the tear in the tunica albuginea was neatly repaired.

Much earlier than we expected, within 72hours, this patient started having regular strong erections 3 - 4 times during the day. We were not comfortable with these frequent erections because of fear of anastomosis breakdown; hence he was commenced on oral diazepam. Apart from this, other possible complications include dyspareunia, chordee, intromission, penile aneurysm and fibrous plaque/indurations.<sup>7, 14</sup> Fortunately, this patient did not experience any complications, before he was lost to follow up.

It is our belief that early presentation and early surgical intervention with proper repair contributed to the good prognosis in this case. This lends credence to earlier reports in favour of immediate surgical repair by most authors in this condition.<sup>3, 5, 6, 12 - 15</sup>

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