

Long-standing penile strangulation by a thread leading to urethral constriction

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A 12 year old boy was admitted with difficulty in passing urine and history of intermittent retention of urine. Urethral catheterization was tried but failed however catheterization was possible after cysto urethroscopy. Patient had penile strangulation by a thread one year back with thickening and swelling of the mid of the penile shaft. Exploration of the strangulation was done with removal of thread and excision of fibrous tissue. The thread was of polyester-like material.

Penile strangulation is a rare injury that leads to a wide range of vascular and mechanical injuries^{1,2}. penile strangulation was first time reported in literature in 1755³. The various objects are used for strangulation are metallic, non metallic objects, (strong rubber band, condom ring) which are placed around the penis to enhance sexual performance or for some auto erotic intention⁴. Any age can be affected⁶, the penile strangulation by a thread or hair is also called penile tourniquet syndrome. The usual presentation of this constriction syndrome is in the form of penile swelling, phimosis, stricture at the base of penis, lymphedema and sign of vascular insufficiency, necrosis (urethrocuteaneous fistula), to a gangrene (partial or complete amputation of the penis)^{5,6} most of the injuries are either incidental, accidental or intentional in nature⁵.

Below is presented a case of long standing chronic penile constriction by a thread leading to urethral constriction and penile swelling and thickening of penile tissue and skin over it.

Case report: A twelve year old boy was admitted in the Urology Department, Sheikh Zayed Medical College/ Hospital, Rahim Yar Khan in March 2009 with complaint of difficult in urine, history of intermittent retention of urine and constant dribbling of urine. There was no other complaint regarding other system. On thorough interrogation the father of boy told that the son had an accident where he applied a thread ligature around the penile shaft a year ago which according to him had disappeared after giving rise to swelling of the penile shaft. On examination vitals were normal, patient was circumcised. The glans penis was normal with normal external urethral meatal opening. There was swelling, thickening and hardening of the mid of the penile shaft and the skin over it was not mobile (Figure 1). Rest of the penile shaft was normal with normal mobile skin. The urinary bladder was palpable and percussable.

All routine investigations were within normal limits. A Foley catheter (10Fr) and a feeding tube (12Fr) was tried but could not be negotiated. At cystourethroscopy there was an annular ring-like constriction of the penile urethra. The scope was passed with some force and dilatation of the annular ring was done by a dilator and a Foley catheter No. 12FR was passed. 200ml of urine was evacuated from the urinary bladder. The penile shaft was operated for the exploration of thread (string) a circular incision was given just over the strangulated band. Skin and fascia was explored, a thick band of fibrous tissue was excised with a string of thread found incorporated and embedded into deep fascia. It was explored and pulled out by a artery forceps (Figure 2). The whole of the fibrous band was excised and corpora cavernosa and spongiosa were inspected which were found to be normal. The cut tunica albuginea was closed with absorbable sutures (Vicryl 3/0). The skin and fascia were closed in layers, the compression bandage was applied over the wound and dressing was reopened after 48 hours. The wound was found to be normal. The patient remained five days in a hospital with uneventful postoperative recovery. Patient was followed in OPD after one week and the Foley catheter was removed on the 12th day postoperatively. The patient had a normal urinary stream and slight penile swelling after two week of follow up.

Discussion: Entrapment syndrome or strangulation of the penis is a well known but uncommon clinical emergency which presents with progressive painless disfigurement of the penis caused by a strand of ligature and thread coiled around the penile shaft⁷. Different types of constricting objects

like wedding ring, metal plumbing with bull ring, hammer and plastic bottle neck have been described⁷. Instead of the routine strangulation or amputation the tourniquet sometimes had become embedded into penile tissue leading to growth of exuberant granulation tissue and fibrosis⁸. Constriction penile band injury can be managed by either conservative approach or by surgical technique^{8,9}. Various surgical techniques are used to approach the defect by either giving a circular incision or by degloving of the penis¹⁰. If the condition is acute the treatment is by decompression of the constricted penis. But if the penile constriction is longstanding and chronic, there are chances of incorporation of a tourniquet into penile tissue with granulation and fibrosis development at the initial site of injury⁸. In this case, a circular incision was used to explore the site of constriction and removed the thread with preservation of normal penile anatomy.

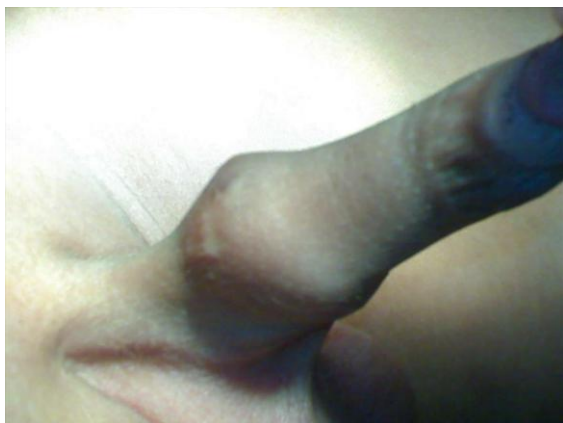


Figure 1 Showing thickening and swelling at the base of penile shaft

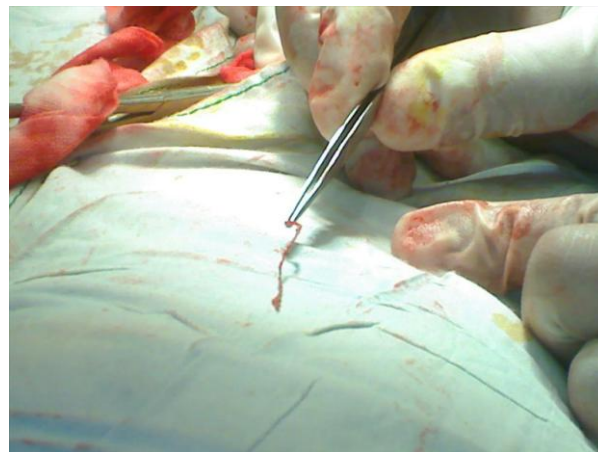
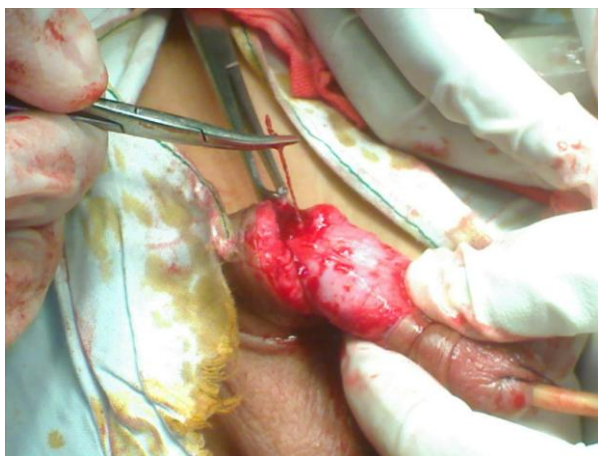


Figure 2 Thread in situ (left) and after removal (above)

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