

## Penil Strangulation Injury: A Case and Review of the Literature

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### ABSTRACT

Constriction injuries of penis with foreign material is a very rarely observed clinical picture. May occur frequently in children by using hair, elastic band or fiber. Young adult cases which were injured by metal or plastic autoerotic loops are reported. We represent a 70 year old patient who apply to us due to constriction injury on his penis caused by tying a laundry line to his penis root because of urine incontinence problem. Our aim is to share this rarely seen type of injury and represent a literature knowledge about this topic.

### Keywords

Penis, Constriction injuries, Ischemia.

### Introduction

Constriction injuries of penis is a rarely seen clinical manifestation. It is observed in the literature as single case reports. There are case reports consist of hair [1], fiber [2] in children, metal loops [3-5], bottle [6] in young adults for autoerotic purposes, tying elastic bands [5,7,8] or condom probe application [9] to penis shaft for blocking urine continence in elder population. Acute injuries can create emergency manifestations including strangulation, penis necrosis and autoamputation [10]. Chronic injuries generally consist of necrosis of the skin on penis, lymphedema, having difficulty in erection, urethral strictures. Severity of injury is determined by type of the constriction device (elastic, metal), duration of constriction, constriction severity, frequency and width of the constriction device and personal hygiene [5,11].

### Case

A 70 year old male patient who doesn't have any other additional disease referred to our clinic from urology department by detecting an open wound on his penis shaft (Figure 1). Superficial skin defect having 2 cm width and proceeding circular through penis shaft, and advanced penile edema in distal part of the defect is detected during physical examination (Figure 2). Penile temperature is normal and there is no sign of ischemia. It is reported that the patient is living alone and once a week a relative is visiting him, thus the penile wound is detected and the patient is taken to doctor.

Due to the cognitive functions of the patient is insufficient, since when the wound is present can not be learned.



Figure 1: An open wound on penis shaft.

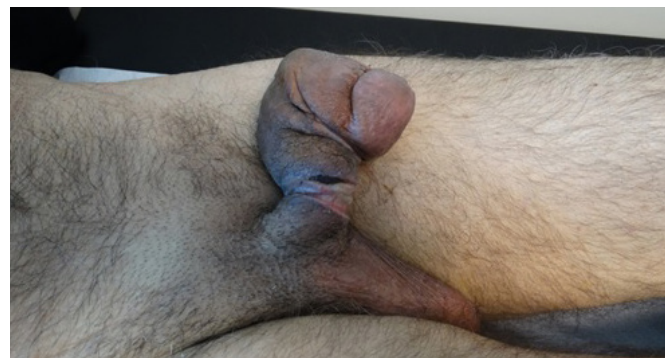


Figure 2: Penile edema in distal part of the defect.

However, it is understood from the statements of the patients relative that the patient is tying his penis shaft at nights through 1 year. Medical treatment is started for the patient with benign prostate hypertrophy diagnosis by urology clinic. We recommended pomade with antibiotics and daily medical dressing change for the patient with low grade penile strangulation injury diagnosis. It is observed that the patients open wound is epithelised and edema is recessed when he came for control 2 weeks later.

## Discussion

Constriction type injuries of penis are rarely seen in literature and represented as single case reports. Hair [1] and fiber [2] draw attention as a constriction material in childhood presentations. In adults, injuries due to metallic loops [3-5], plastic bottle [6] usage for increasing erectile power are reported. Among elder population, it is observed that elastic bands are used for blocking urine incontinence by squeezing penis shaft.

Severity of injury is determined by type of the constriction device (elastic, metal), duration of constriction, constriction severity, frequency and width of the constriction device and personal hygiene. Constriction devices can cause penile congestion by blocking venous return. This situation ends with increased penile turgor and delayed erection. However, if venous blockage proceeds, penile swelling lymphatic obstruction and arterial obstruction progressively develops. If duration of venous blockage lasts more than half an hour, it leads penile ischemia and infarct [12].

Silberstein and colleagues are classified penile strangulation injuries into two categories [12] as low grade and high grade. According to this, low grade injuries are only treated by removing the constriction device. Penile edema, skin ulceration, reduction penile sensation can be observed in low grade injuries. High grade injuries require surgical treatment. For example, urethral fistula, ischemic damage and gangrenous penis necrosis. In the same study, retrospective literature analysis of penile strangulations are carried out and detected that approximately 68 % of the patients have low grade injuries. Our patient has penile edema, skin necrosis on the tied area, and reduction of penile sense. Thus our patient can be considered as low grade injury.

The first stage of the treatment is removing the constriction material. If it is like an elastic band or fiber then removing is relatively easy. Its' like cutting the fiber or band with scissors. However if constriction is applied with a material like metal loop, ring or plastic bottle neck then removing is more invasive. String technique and penile aspiration [13], non electronic sharp devices [14], electronic sharp devices or drills [15], oscillating splint saw [16], air driven grinder [17] can be used. Problems like not having those devices in technic service of every hospital or can not found available technical staff to use them every time, can occur. In these circumstances, help can be requested from occupation groups like fire officer, police, dentist who are more prone using those devices than us. In high grade injuries including devitalize and gangrenous tissues, if constriction material can not be removed

penile degloving or penile amputation will be kept in mind as a last choice.

After removing the constriction material, penis should be observed closely for the irreversible arterial obstruction possibility which is caused by penile edema. Colored doppler usg can be used for eliminating possibility of thrombosis or vascular damage [18]. It should be remembered that after an acute constrictive injury, a few hours later ischemic gangrene can develop following removal of the constriction device [19]. Thus, it is recommended that until observing the regression of edema, follow ups should be done [12].

Final treatment can vary depending on the severity of injury. Low grade injuries reveal with only superficial skin necrosis, penile edema and penile sense reduction. Treatment for low grade injuries includes observation and appropriate change of dressing and follow ups. Superficial skin necrosis of our patient is debrided and defect area is completely recover by the help of pomade with antibiotic and dressing therapy in 2 weeks. When skin necrosis is too wide for secondary wound healing, then restoration with split thickness skin graft technique can be provided [5]. Deeper necrotic injuries can require partial amputation procedures [8,9].

## References

1. Singh B, Kim H, Sandor H. Strangulation of penis by hair. *Urology*. 1978; 11: 170-172.
2. Saiad MO. Penile injuries in children. *Turk J Urol*. 2018; 44: 351-356.
3. Sinha BB. Penile incarceration by a metallic object. *Br J Surg*. 1988; 75: 33.
4. Osman M, Al Kadi H, Al Hafi R. Gangrene of the penis due to strangulation by a metallic ring. *Scand J Urol Nephrol*. 1996; 30: 77-78.
5. Sawant AS, Patil SR, Kumar V, et al. Penile constriction injury An experience of four cases. *Urol Ann*. 2016; 8: 512-515.
6. McGain F, Freedman D. Penile entrapment in a bottle The case for using a diamond-tipped portable glass saw. *BJU Int*. 1999; 83: 1071-1072.
7. Sasaki Y, Oda S, Fujikata S, et al. Gangrene of the penis due to strangulation by a rubber band A case report. *Hinyokika Kiyo*. 2014; 60: 155-157.
8. Mukherjee S, Sinha RK, Ghosh N, et al. Urinary incontinence following transurethral prostatectomy presenting as self inflicted penile gangrene. *BMJ Case Rep*. 2015.
9. Özkan HS, 'Irkoren S, Sivrio'glu N. Penile strangulation and necrosis due to condom catheter. *Int Wound J*. 2015; 12: 248-249.
10. Badawy H, Soliman A, Ouf A, et al. Progressive hair coil penile tourniquet syndrome Multicenter experience with 25 cases. *J Pediatr Surg*. 2010; 45: 1514-1518.
11. Perabo FG, Steiner G, Albers P, et al. Treatment of penile strangulation caused by constricting devices. *Urology*. 2002; 59: 137.
12. Silberstein J, Grabowski J, Lakin C, et al. Penile constriction devices Case report review of the literature and recommendations for extrication. *J Sex Med*. 2008; 5: 1747-

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- 1757.
13. Noh J, Kang TW, Heo T, et al. Penile strangulation treated with the modified string method. *Urology*. 2004; 64: 591.
  14. Greenspan L. Tourniquet syndrome caused by metallic bands: A new tool for removal. *Ann Emerg Med*. 1982; 11: 375-378.
  15. Huang JKC, Holt D, Philp T. Penile constriction by foreign bodies The use of a dental drill. *Br J Urol*. 1997; 79: 801.
  16. May M, Gunia S, Helke C, et al. Penile entrapment in a plastic bottle A case for using an oscillating splint saw. *Int Urol Nephrol*. 2006; 38: 93-95.
  17. Santucci RA, Deng D, Carney J. Removal of metal penile foreign body with a widely available emergency-medical-services-provided air-driven grinder. *Urology*. 2004; 63: 1183-1184.
  18. Theiss M, Hofmockel G, Frohmuller H. Fournier's gangrene in a patient with erectile dysfunction following use of a mechanical erection aid device. *J Urol*. 1995; 153: 1921-1922.
  19. Rana A, Sharma N. Masturbation using metal washers for the treatment of impotence Painful consequences. *Br J Urol*. 1994; 73: 722.