Penile strangulation: A case report of a potentially serious emergency condition in a young male

Sir,

A 19-year-old man presented to us with redness, swelling, and pain of the penis since the day before the presentation. Examination revealed that a white plastic ring-like thing entangled on the proximal end of the penile shaft. Distal to the ring, there were edema, tenderness, and erythema of the shaft of the penis [Figure 1]. The overlying skin was shiny and stretched with a few dilated superficial blood vessels. There was no feature of urinary retention. History revealed the use of multiple objects for masturbation in the past. For this time, he used a plastic ring for sexual pleasure and ended up in entrapment of the penis. The boy was referred to the surgery department where the plastic ring was removed by cutting it. The patient recovered shortly without any sequel. Afterward, psychological evaluation of the patient was done. With confidentiality, he admitted that since the age of 14 years, he has started to masturbate and often used objects such as metallic and plastic rings for it. He had a very frequent act of masturbation, and often, it was very difficult to control his urge. He had no substance addiction or abuse. He had no special friend and never experienced sexual intercourse. Except high sexual curiosity and compulsive masturbation, he had no other psychiatric problem and his intelligence quotient (IQ) was average (full-scale IQ = 90). Strangulation of the penis is a distinctive but rare clinical entity first reported by Gauthier in 1755.[1] Till then, a few cases have been reported in the literature.[1-9] In adolescence and young adults, the cause is sexual pleasure, curiosity, and masturbation, whereas in middle-aged and elderly people, it is used to increase sexual performance or because of autoerotic intensions. Sometimes, strangulation of the penis also happens accidentally in infants because of tying string or hair around the shaft of the penis.[4,5] The foreign bodies leading to strangulation of the penis may include metallic and nonmetallic objects including iron rings, ball bearings, spokes, plastic bottles, rubber rings, nuts, pipes, and wedding rings among others.[2,3,6] These objects can cause a wide range of injuries such as simple edema, ulceration, necrosis, urinary fistula, and gangrene leading to autoamputation.

Bhat et al. proposed a grading system of these injuries based on their findings in eight patients.[7] The strangulation injuries were graded as Grade 1 (distal penile edema and no evidence of skin ulceration or urethral injury), Grade 2 (injury to skin and constriction of corpus spongiosum but no evidence of urethral injury and decreased penile edema with decreased penile sensation), Grade 3 (injury to skin and urethra but no urethral fistula and loss of distal penile sensation), Grade 4 (complete division of the corpus spongiosum leading to urethral fistula and constriction of the corpora cavernosa with loss of distal penile sensation), and Grade 5 (gangrene necrosis and complete amputation of the distal penis). The clinical assessment of penile strangulation may be done by noting the local temperature, sensation, color, ability to void, distal pulsations, and local tissue injury at the site of constriction.[6]

Magnetic resonance imaging of the penis and the genital area may be of help to assess the extent of the injury.[9] The distal blood flow can be checked by Doppler flow meter or Wood lamp examination after intravenous fluorescein.[8]

Treatment techniques for penile incarceration may include the string technique and its variants (with and without aspiration of blood from the glans), aspiration techniques, cutting devices, and surgery.[3] The choice in a particular patient should be tailored according to the characteristics of the constriction devices and grade of trauma.[3] In case of strangulation with nonmetallic objects, the objects may be removed with scissors. On the other hand, in the metallic group, the objects may be removed with a metallic cutter, saw, heavy drill or hammer, and chisel.[6,7] Furthermore, an evaluation of the urethra is
of utmost importance to confirm its integrity.\([1]\) The present case had a Grade 1 injury and needed only the removal of constricting plastic device without any further complication.

Bhat et al. mentioned that with one exception, all patients of their series were of normal intelligence.\([2]\) The patient may also have features of somatization disorder similar to Munchausen syndrome or character perversion.\([3]\) Penile strangulation has also been reported in a patient with bipolar disorder.\([4]\) Our patient was of normal intelligence, but he additionally had features of compulsive masturbation. Hence, psychological evaluation and management may be beneficial for such patients to avoid further episodes.

In most of the cases, penile strangulation remains an acute condition and should be managed immediately in the emergency department. However, the occurrence of chronic penile strangulation with secondary lymphedema\([5]\) has been reported by Tanabe et al. Patel et al. reported another case of long-term penile strangulation with metal radiator clamps for the self-treatment of penile fracture.\([6]\) Another noteworthy observation is that patients often present late due to embarrassment of revealing the problem to others, especially if the strangulation takes place during a sexual activity.

Patients often attend the dermatology-venereology clinic to seek medical opinion about any sort of genital problem. Hence, dermatologists and venereologists may encounter penile strangulation in their clinical practice as in the present case. Dermatologists, therefore, play a role in the prompt recognition of a case of penile strangulation and by timely appropriate referral; they might prevent further ischemic damage of the penis.

To conclude, penile strangulation is a distinctive but rare condition and may lead to severe mechanical and vascular injury. Early diagnosis and rapid intervention is of utmost importance. Dermatologists may also encounter such a potentially serious condition in their clinic. In this article, we further sought to emphasize the importance of psychological evaluation in the management of such cases.

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