

Penile Strangulation Due to a Metal Ring - A Case Report

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An 85-year-old man presented to the emergency room with progressively weakness of lower legs and being unable to stand up for 1 day. He had a history of Parkinsonism, dementia and diabetes mellitus which were under regular medical control. Physical examination showed mild fever (37.6°C), rales over the right lower lung, and knocking pain at left flank area. Preliminary blood tests revealed a white blood cell count of 17500/ μ L (normal range 4000 -10000/ μ L), and C-reactive protein of 9.7 mg/dL (normal range <1.0 mg/dL). Urinalysis revealed a white blood cell count of 5-7/HPF with positive nitrate reaction. X-ray of chest revealed minimal pulmonary infiltrates over right lower lung. The patient was hospitalized for antibiotic treatment under the tentative diagnosis of pneumonia and urinary tract infection. On reception at ward, we incidentally found a metal ring encircling his edematous penile shaft (Fig 1). It was unknown when or why the metal ring was placed on the patient's penis. The urologist removed the metal ring by a wire cutter for him on the second day of hospitalization, and found prepuccial skin erosion underneath the constricting ring (Fig 2). The prepuccial erosion and swelling was recovered gradually after removal of metal ring.

DISCUSSION

The penis is a very delicate and sensitive organ, and even minor injury may cause serious discomforts. Some conditions such as priapism, paraphimosis, and penile entrapment injury, if left untreated, can result in ischemia and necrosis of the penis. Any penile trauma should be managed urgently until proven otherwise [1].

Entrapping the penile shaft with rings or other constricting bands may be used for reducing venous return and to maintain an erection [2]. Depending on the material and degree of entrapment and distal edema, releasing the metal ring may be challenging. The string method, advised by Noh J, similar to that used to remove a ring from a finger, may be applied in less severe case [3]. However, ring cutters as pneumatic saws may be required in more severe conditions. The skin entrapped under the metal ring must be protected from the blade in manipulation. Because a large amount of heat is often generated from these saws, continuous irrigation of the area with cold water or saline is



Fig. 1. Penile swelling and edema due to a metal ring (arrow).



Fig. 2. Erosion of prepuce (arrow) under the metal ring due to prolonged compression.

also necessary to prevent thermal injury [4]. Ischemia or gangrene of the distal penis may occur with prolonged entrapment, and sometimes, penile amputation may be inevitable [5]. This case highlights the importance of detailed physical examination, including the genital organs, for hospitalized patients. Moreover the metal ring around the penis can be carefully removed by the wire cutter.

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