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Case Report
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Rare Cause of Testicular Torsion in a Trans Woman: A Case Report

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Abstract

Testicular Torsion (TT) is an emergency which affects approximately 1/4000 males under 25 years. It usually presents as an acute scrotal pain and has been associated with anatomical, traumatic and environmental factors, among others. This is a case of a 24 year old trans woman, presenting with a sudden onset of right scrotal pain and was initially seen at Emergency Room (ER) – Out-Patient Department (OPD), Family Medicine service. Doppler ultrasound revealed decrease flow in the right testicle suggestive of TT. Detorsion and orchiopexy were advised but patient refused and wanted to have bilateral orchiectomy instead. Consequences of bilateral orchiectomy were presented to the patient as well as the long – term prognosis of detorsion and orchiopexy. A delay in patient's consent led to a 10 h gap after the first presentation of the symptom. Radical orchiectomy, right done by Surgery Service was performed and showed widespread necrosis. As a primary care provider, we should recognize TT as a possible cause of testicular pain using a diagnostic triad of history, examination and investigation. Calculation of TWIST score is useful to avoid unnecessary diagnostics and to have a prompt urology/surgery referral when suspected. This case also highlights an important message on awareness among transgender individuals who does tucking, that it can cause infertility and will limit their chances to have a biological child in the future. Patients should make good decisions, twists and turns are inevitable but if you don't design your own life plan, chances are you fall into someone else's plan.

Keywords: Testicular Torsion; Scrotal Pain; Trans woman; Tucking; Cross - Dress

Case Presentation

The patient is a 24-year-old male who presented with a 10 h history of right scrotal pain. The pain was sharp and persistent, radiating to the right lower abdomen and right inguinal area with pain score of 10/10 associated with progressive right scrotal swelling. No history of trauma, fever, nausea, vomiting, or urinary problems.

Patient was initially decked in family medicine service where physical examination findings revealed right scrotal swelling with tenderness and erythema. TWIST (Testicular workup for Ischemia and Suspected Torsion) score result was 4 which considered as an intermediate – risk, thus Stat Ultrasound evaluation was advised and primed for possible surgery.

Doppler ultrasound revealed decrease flow in the right testicle suggestive of testicular torsion. He was primed for possible right orchiectomy but he decided to do bilateral orchiectomy instead. Risks of bilateral orchiectomy especially on the infertility and the chances of him to have biological child in the future where presented. After an hour, patient consented for right orchiectomy. He was subsequently transferred to Surgery service.

Patient undergone bilateral breast enhancement last July 2018, bilateral hip augmentation by fat injection and forehead with nose augmentation by filler injection on year 2018. He cross-dressed as a female and part of this required tucking or physical manipulation of his testicles by slipping them back into the inguinal canal and pulling the empty scrotum and penis down and back toward the space between his buttocks then wears a tight-fitting underwear or compression undergarment when he dressed in female attire. In order to return his testicles to normal position, he would grab his scrotum and spermatic cord to pull his testicles out of his inguinal canals. He does tuck 2 to 4 times a week for 6 years and experienced discomfort and slight pain which he tolerated to achieve feminine profile especially when he was joining pageants. Being identified as Tran's woman exposes him to harassment or violence and that joining pageants is his source of income. Patient was also taking anti-androgen pills (Cyproterone acetate 2 mg, Ethinyl estradiol 35 mcg) for 6 years to

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Figure 1: Swollen right scrotum.

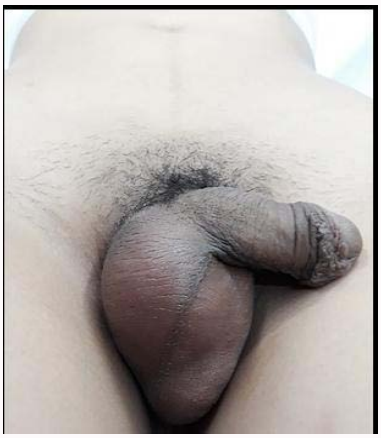

Figure 2: Elevated right testicle in horizontal lie.

facilitate feminization, causing the testes to shrink for easy tucking.

Upon admission, patient was in severe pain with stable vital signs. The right scrotum was swollen, smooth, firm with erythema and tenderness (Figure 1). Right testicle is elevated and assumed a horizontal position, opposite with the vertical position of left testicle (Figure 2). There was negative Prehn's sign and negative cremasteric reflex.

The Diagnosis

Patient was counseled before he was referred to surgery, his insights about bilateral orchiectomy were expressed and he disclosed that it would be easier for him to do cross-dressing without his testis. He was then educated and presented with cases wherein other Trans genders, ages 30 to 40 years old wanted biological child. For him not to regret his decisions in the future, he agreed with the proposed procedure. He was then referred to Surgery Service and was scheduled for surgery. Right radical orchiectomy was performed the same day of admission. Grossly, right testis and cystic mass were noted to be reddish-black with note of dark-red spermatic cord (Figure 3). Cut sections of cystic mass reveal a unilocular cyst filled with blood clots. Pathology study revealed widespread necrosis. There were no complications on the first hospital day (post-operative day 1) and the patient was discharged. The patient was counseled not to do strenuous activities for 2 weeks and tucking again.

The patient was seen 2-weeks post-radical orchiectomy, right and denied any further complaints. Advice not to do tucking again was reiterated since there is a possibility of left testicular torsion. Patient

Figure 3: Right testicle with hemorrhagic necrosis.

was also guided that he can already return to his regular activities and exercises. Intake of anti-androgen pills was brought up, since he wanted to have smaller testis to do cross-dressing again. He was informed that normal spermatogenesis resumes after discontinuation of the medication.

Discussion

Physical examination plays an important role in diagnosing testicular torsion. A study by Rabinowitz et al. [1] involving 245 boys with acute scrotum, they observed a 100% correlation of present cremasteric reflex in the absence of testicular torsion, and concluded that the presence of the cremasteric reflex is the most valuable clinical finding for ruling out testicular torsion whereas its absence of cremasteric reflex increases suspected diagnosis. The scoring system TWIST developed by Barbosa et al. [2] is also an important step to evaluate patients with acute scrotal pain. Sheth et al. [3] prospectively studied 128 patients with torsion and noted a positive predictive value of 93.5% and a negative predictive value of 100% in using TWIST scoring. They also concluded that TWIST score assessed by non-urologist, such as emergency medical technicians, is accurate and the scores will guide radiological evaluation and immediate surgical intervention at initial assessment long before urological consultation. Thus, clinical assessment and the calculation of TWIST score is useful especially to primary care physicians to assess risk of torsion based on a symptom score and can be used to avoid unnecessary ultrasound confirmation of torsion prior to surgical exploration.

In the adult, testicular torsion is a rare cause of the acute scrotum, where infectious diseases, and sometimes neoplasms, are underlying the majority of these presentations [4]. It is believed to be due to an anatomical bell-clapper deformity of the testicle and with this genetic disposition, 65%, of cases usually present at 18 years of age [5,6]. However, other possible causes of torsion include various traumatic events such as straddle injury, a knee to the groin, collision while playing team sports, and fall. In 2016, Epps and colleagues reported the first case of testicular torsion in a 28-year-old male due to self-testicular manipulation during acts associated with cross dressing [7]. In our case, the patient had issues about testicular salvage and wished to remove both of his testes which cause a delay in intervention. If surgery is performed within the first 6 h from the beginning of symptoms, there is up to 90% chance of recovery. This drops to 50% if it is after 12 h and to 10% after 24 h has described by Davenport [8]. The outcome of the case we present was not one we would have wished for, since the patient presented at the emergency room with

over 10 h after the symptom onset and lost the affected testicle.

The Takeaway

We presented a case of an adult Tran's woman with right testicular torsion cause by tucking. While not as frequently encountered in adults and patient's history revealed an unusual cause of testicular torsion, this should always and highly be considered in the differential diagnosis of acute scrotum. Delayed diagnosis should be avoided since timely intervention is essential for successful outcome and increase likelihood of preserved testicular function. Immediate surgical exploration with detorsion and fixation of testis is recommended, but informed consent should be done since long-term prognosis is unknown.

This case highlights the importance of our practice as primary care providers to recognize testicular torsion as a possible cause of testicular pain and to have a prompt urology referral when suspected. As in this case, the patient already experiences discomfort and pain for 6 years because of tucking which is also the same with other Tran's genders but they are reluctant to seek medical care for testicular complaints and when they do, it may be already late to salvage the testis. With this second reported case, the patient with the same gender may become aware that tucking could create a suboptimal environment for spermatogenesis and worst, can cause testicular loss due to torsion. Although at younger age, trans women desires to hide their testicles or wished to have gender – affirming surgery, as they grow older many transgender individuals desire to have biological children. According to the results of Tornello and Bos, 47% of the surveyed self-identified transgender individuals wanted to have a genetically related child, thus awareness of the problem should be disseminated for them not to resent in years to come [9].

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