

## Testicular Torsion in an Adult Male: A Case of Neglected Torsion

Mukambo Chinayi<sup>1</sup>, Nkomba Chamileke<sup>2\*</sup>, Bassem Wayed<sup>3</sup>

<sup>1</sup>University of Zambia, School of Medicine

<sup>2,3</sup>University Teaching Hospital

\*Corresponding Author: [nchamileke@gmail.com](mailto:nchamileke@gmail.com)

### Abstract

*Testicular torsion is a true surgical emergency caused by twisting of the testicle on the spermatic cord leading to disruption of the vascular supply and time sensitive ischemia with or without necrosis of testicular tissue. The annual incidence is 1 in 4000 males under the age of 25 years globally, with peak presentation in adolescents between 12 to 16 years as well in the neonatal period. However, there are rare cases in which adult males present with testicular torsion and this case study explores one such instance looking at its unique features and at the same time underscoring an important point that torsion can occur outside the bimodal peak. The case report illustrates that age distribution maybe clinically misleading and should not be relied upon for a diagnosis.*

**Keywords** testicular torsion, epididymitis, surgical emergency, ischemia.

### Introduction

Testicular torsion refers to a condition in which there is twisting of the spermatic cord leading to decreased blood flow to the testicle resulting in ischemia/infarction and tissue necrosis <sup>[1]</sup>. The annual incidence is 1 in 4000 males under the age of 25 years globally <sup>[2]</sup> with peak presentation in adolescents between 12 to 16 years and the neonatal period <sup>[3]</sup>. Testicular torsion is a common urological problem affecting 1 in 4000 males below the age of 25 <sup>[4]</sup>. It is a urological emergency hence the need for every medical practitioner to be able to diagnose the condition or consider it as a differential in patients presenting with acute scrotal pain. This however is easier said than done because not all patients with testicular torsion fit the classical clinical vignette which is that testicular torsion is mostly a condition which has a bimodal peak affecting neonates and adolescents between the ages of 12 to 16 years <sup>[5]</sup> and this case report looks at a unique case where an adult male presented with testicular torsion.

### Case report

NM, Male 27 years, presented to the emergency department of the University Teaching hospital (UTH) with a 4day history of right sided testicular pain. NM was referred from one of the local clinics. The pain was of sudden

onset and it started while the patient was cleaning around the house. The pain was mostly felt in the right scrotal area, it was sharp, severe and was associated with localised swelling. On the same day he visited the local clinic where he was given painkillers (diclofenac) which alleviated the pain. He was also started on antibiotics (doxycycline and then ciprofloxacin for 3 days). However, he had no hx of dysuria, genital discharge or fever, there was also no hx of nausea and vomiting. The patient's swelling persisted despite analgesia and antibiotics and 4 days later he was referred to UTH. He is not hypertensive or diabetic, he is HIV negative and has no hx of a similar presentation. There is a hx of alcohol intake and smoking.

On examination, he was afebrile to touch and vitals were in the normal range. Respiratory, cardiovascular and gastrointestinal systems were clinically clear. Local exam: inspection of the perineum showed normal hair distribution and normal genitalia, right hemi scrotal swelling. On palpation the right testicle was tender, elevated compared to contralateral testis and horizontal lie. Prehn's sign was negative. Left testicle was normal. Doppler ultrasound done 4 days after onset of symptoms revealed no vascularity on the right testis and hypoechoic texture while the left testis was normal. Patient was taken to theatre on day 7 (one week after onset of symptoms). Scrotal exploration was carried out and the

findings were as follows: right testicular torsion with adhesions and necrosis, left testis viable (figure 1). Surgeon proceeded to do a right orchidectomy and left orchidopexy and closed up with sutures.

Patient was placed on painkillers (diclofenac 75mg/1ml/BD and pethidine 100mg QID), and antibiotics (ceftriaxone 1g and metronidazole 500mg TDS).

## Discussion

As stated earlier stated testicular torsion is a urologic emergency caused by the twisting of the testicle on the spermatic cord leading to constriction of the vascular supply and time sensitive ischemia and/or necrosis of the testicular tissue [6]. Torsion maybe extravaginal or intravaginal. Intravaginal testicular torsion is the more common type occurring frequently at puberty. It results from anomalous suspension of the testis by a long stalk of spermatic cord resulting in complete investment of the testis and epididymis by tunica vaginalis. This anomaly is called 'Bell clapper deformity'. Bell clapper deformity is present in approximately 12% of males:40%of them are affected in both testicle<sup>[7]</sup>. Extravaginal testicular torsion most often occurs in new-borns without the Bell clapper deformity. It is thought to result from a poor or absent attachment of the testicle to the scrotal wall allowing rotation of the testicle, epididymis and tunica vaginalis as a unit causing torsion of the cord at the level of the external ring<sup>[8]</sup>. Risk factors for testicular torsion include the following: top of the list is age, testicular torsion has a bimodal distribution affecting mostly neonates and adolescents between the ages of 12 to 16 years. It rarely affects adults and so it is missed sometimes in adult males presenting with acute scrotal pain as they are misdiagnosed with epididymitis and this is a common mistake as this case report has highlighted. Other risk factors include history of cryptorchidism, horizontal testicular lie and increased spermatic cord length.

With regard to aetiology, testicular torsion often occurs spontaneously without any perceivable cause by the patient but some factors that may precipitate torsion of the intravaginal type include; congenital anomalies, bell clapper deformity, undescended testis, sexual arousal or activity, exercise, active cremasteric reflex and cold weather. Torsion may be clockwise or anticlockwise. In terms of pathophysiology,

testicular torsion occurs as the testicle rotates between 90° and 180° compromising blood flow to and from the testicle<sup>[8]</sup>. Complete torsion usually occurs when the testicle twists 360° or more while incomplete or partial torsion occurs with lesser degrees. Classic presentation of testicular torsion is acute onset intense unilateral scrotal pain (less frequently abdominal and inguinal pain), nausea and vomiting, trauma and similar pain in the past<sup>[9]</sup>. On physical exam unilateral tender and firm testicle, scrotal erythema, oedema, loss of cremasteric reflex and affected testicle is typically higher.

With all this information we have a clear picture of how a patient with torsion would present but when we look at our patient it is evident that he does not fit into this classic presentation of testicular torsion. To begin with our patient is beyond the usual age range of 12 to 16. The patient is 27 years old which is outside the normal bimodal age distribution of this condition, this is very unique and it underscores an important point which is that testicular torsion can occur at any age. Torsion has even been documented in much older patients, one even as old as 67<sup>[10]</sup>. So, doctors need to have a high index of suspicion in every male presenting with acute scrotal pain because testicular salvage is only possible within 4-6 hours after torsion. Another unique feature of this case is the pattern of pain felt by the patient. As stated earlier pain classically caused by testicular torsion is intense, unrelenting and most times disabling but the patient was able to relieve the pain with painkiller (diclofenac) and actually took him a few hours to visit the clinic where unfortunately due to the unusual presentation (age and pattern of pain) a wrong diagnosis of epididymitis was made and patient was actually started on antibiotics(doxycycline then ciprofloxacin for 3 days). Four days passed before the patient was referred to UTH where a diagnosis of torsion was made on admission. The salient lesson here is although torsion usually occurs around puberty and epididymitis typically affects sexually active men after the age of 20 years, age distribution maybe clinically misleading and should not be relied upon heavily for a diagnosis <sup>[10]</sup>. Also, the pattern of pain in testicular torsion is not always the classic intense unyielding pain, sometimes it responds well to painkillers as in this case and some times pain can even be intermittent as in some reported cases of intermittent testicular

torsion (ITT)<sup>[12]</sup>. One can even add the fact that the patient presented at a warmer time of the year which usually is not the case<sup>[8]</sup>.

## Conclusion

The case presented outlines the importance of having a high index of suspicion in patients who present with acute scrotal pain regardless of age

despite the classical presentation following the bimodal peak of neonatal period and adolescence.

All these unique features of this case leave us with a myriad of questions as to what could have caused such a presentation but also provides us with a great learning opportunity from a unique presentation of testicular torsion in an adult male.



**Figure 1.** Picture showing area of torsion (blue arrow) as seen during surgery

## Acknowledgments

I would like to thank the staff of the urology clinic at the University Teaching Hospital and the patient for permission to use their information as a case report.

## References

- [1] Ringdahl, E., Teague, L., 2006, Testicular torsion. *Am Fam physician*. 2006 Nov 15;74(10):1739-43.
- [2] Karen, C., JaNeille, S., Gerry H, 2011, Testicular torsion: A case study and evaluation of young men's knowledge about testicular pain. *W Vamed J207* :35-37.
- [3] Lahdes-Vasama, T., Rajakorpi H, Wikstöm, S., 2007, A 19-year review of paediatric patients with acute scrotum. *Scand S Surg*. 2007;96:62-66[PubMed] [Google Scholar].
- [4] Ringdahl, E., Teague, L., 2006, Testicular torsion, *Am Fam physician*. 2006 Nov 15;74(10):1739-43.
- [5] Kallerhoff, M., Gross, A. J, Bötöf, J. C, 1996, The influence of temperature on changes in pH, lactase and morphology during testicular ischemia. *The British journal of urology*, vol 78, no.3 pp 440-445,1996.
- [6] Dogra, V., Bhalt, S, 2004, Acute painful scrotum. *Radiol Clin North Am*.2004; 42:349-363[PubMed].
- [7] Marcozzi, D., Suner, S, 2001, The non-traumatic acute scrotum. *Emerg Med clin North Am* 2001; 19:547-567[PubMed].
- [8] Farrington, N, L., Lucky, MA, Bannes, T., Calvert, R, 2014, Confirmed testicular torsion in a 67-year-old. *J surg case Rep*. 2014;1[PMC free article].
- [9] Gordhan, C. G., Sadeghi-Nejad H, 2015, Scrotal pain: evaluation and management. *Korean J Urol*.2015;56(1):3-11 doi: 10.4111/KSU.2015.56.1.3[PMC free article] [PubMed].
- [10] Eaton, S.H., Cendron, M.A., Estrada, C.R., Bauer, S.B., Borer, J.G., Cilento, B.G., Diamond D.A., Retik, A. D., Peters, C.A., 2005, Intermittent testicular torsion: diagnostic features and management outcomes. *JUrol*.2005, 174:1532-1535[PubMed] [Google Scholar].