

Manual Detorsion of Testicular Torsion - A Primary Care Intervention Procedure. Case Reports.

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Testicular torsion is one of the known acute urological emergencies that require prompt intervention. Salvage of the testis is only possible if derotation is performed within 6 hours of onset of symptoms. The objective of this paper is to report successful manual detorsion of the testes of patients with testicular torsion. Three cases with testicular torsion requiring emergency scrotal exploration underwent manual detorsion after sedation while waiting to be taken to theatre. Case 1, a 15 year old male diagnosed with right sided testicular torsion. Case 2, a 28 year old male with right testicular torsion. Case 3, a 15 year old male who presented with a 6 hour history of left testicular torsion. Attempting manual detortion in patients with acute testicular torsion can salvage the testis against loss.

Key Words: testicular torsion, manual detorsion, testicular survival, orchidopexy.

DOI: <http://dx.doi.org/10.4314/ecajs.v21i3.21>

Introduction

Testicular torsion is a known urological emergency that is characterized by twisting of the spermatic cord leading to acute pain and ischemia of the affected testes. It has a short window period within which salvage can be achieved. Common signs include swelling and redness of the scrotum (in light skinned people), nausea and vomiting, high riding testes, tender, swollen and firm with absent cremasteric reflex. A clear clinical diagnosis and early intervention is essential to avoid testicular loss. Approximately 1 : 4000 males younger than 25 years and 1 : 160 males by the age of 25 years are affected ^{1, 2}. The “bell clapper” deformity is the underlying anatomical anomaly and it accounts for 90% of all cases (a). Acute scrotal pain in all prepubertal and young adult males could indicate testicular torsion until proven otherwise. It had been demonstrated both clinically^{3, 4} and experimentally⁵ that testicular survival depends on the duration of ischemia. Testicular salvage rate is over 98% when diagnosis and detorsion occurs within 6 hours ⁶. The affected testes can only be preserved by detorsion of the spermatic cord to restore perfusion. This can be achieved pre-operatively by manual detorsion or intra-operatively under direct vision.

Case Reports

We report three cases of successful reduction following detorsion, one with oral analgesia and the other with sedation and the third patient with Intramuscular analgesic injection. Scrotal exploration followed soon after and it confirmed successful manual detorsion. Bilateral orchidopexy was thereafter performed.

Case 1

A 15 year old male who developed scrotal pain and swelling at 2a.m. He was brought to casualty at 6 am, three (3) hours after the onset of pain, when the pain and swelling got worse. Physical examination revealed an enlarged right hemi scrotum. It was raised, tender and the testes assumed a transverse longitudinal axis. The tenderness was worsened by elevation of the scrotum, and cremasteric reflex was . Ultrasound performed in casualty revealed testicular torsion.

He was received in theatre 7^{1/2} hours after the onset of pain. Manual detorsion was attempted and successfully achieved after sedation for induction of general anesthesia.

When the scrotal sac was opened, the testes was found to be pink, area of torsion on the spermatic cord noted, bilateral orchidopexy was performed with non-absorbable silk2/0 suture.

Case 2

A 28 year old man reported to our clinic with 4 hour history of sudden onset right scrotal pain, nausea and vomiting with no dysuria or urethral discharge. On examination he had an enlarged right scrotum, which was elevated with the testes lying transversely. The testicle was tender to touch, elevated with absent cremasteric reflex. The Patient initially declined surgery, insisting on U/S which confirmed absent Doppler flow in the right testes.

Manual detorsion was attempted by rotating the testes in anticlockwise direction, after giving oral analgesic, as we waited for the patient to consent for surgery. At surgery blood flow had already been re-established in the right testes with the testes viable.

Case 3

A 15 year old male patient reported to accident and emergency with a 6 hour history of sudden onset left scrotal pain radiating to the lower abdomen. It was associated with nausea and vomiting, but no dysuria, fever or body chills. A Doppler ultrasound done in another hospital before referral, confirmed absent color flow. On examination the left hemiscrotum was raised, tender to palpation. The testes had assumed a transverse orientation and the cremasteric reflex was absent. There was a palpable knot in the spermatic cord above the testes. An intramuscular injection of Tramadol 50mg stat was given in casualty and the patient got completely relieved of pain. Manual detorsion was successfully performed in casualty and a repeat Doppler ultrasound revealed a swollen left testes with a normal Doppler color flow. The patient taken to the operating theater for scrotal exploration where the left testes was found to be viable. Bilateral orchidopexy using a 3/0 silk suture was performed.



Figure 1. Salvaged Left Testes after Manual Distortion of Case 3.

Discussion

Testicular torsion is one of the known acute urological emergencies that require prompt intervention. Salvage is only possible if detorsion is performed within 6 hours of onset^{6,7}.

Prolonged period of ischemia leads to loss of the affected testes. Most torsion of the spermatic cord is from lateral to medial. The preponderance to medial rotation ranges from 67% to 71%⁸. Manual distortion has been reported since 1893 but is not widely practiced⁹. It provides an immediate non-invasive treatment for the problem. The affected testis is rotated away from the midline. Intravenous sedation with or without local analgesia (5mls of 2% lidocaine/xylocaine) infiltration around the spermatic cord near the external ring.

Manual detorsion aims at reversing the twisting through two planes. Due to the higher preponderance to medial rotation, the initial step at reduction involves rotation of the testes in a caudal cranial direction to release the locking mechanism. This is followed by a medial distortion of the spermatic cord. Sequential rotation by 180° in one direction, initially lateral, due to higher predilection to medial rotation, then

maintaining the twist after which it is followed by an attempt to a further 180° or more. Increase in pain or increased resistance may indicate attempting distortion in the wrong direction.

Dramatic reduction in pain indicates success. Elective orchidpexy can be arranged if resumption of blood flow has been documented by Doppler ultrasound. Success rate has been reported at 26.5 % in a meta-analysis ¹⁰ while another put it at 80% ¹¹. Lengthening of spermatic cord, resolution of epididymal and spermatic cord edema, return to anatomical position and near or complete relief of testicular pain confirms successful detorsion ¹². In a primary health facility where surgical intervention is not possible or is not quickly available, manual detorsion will greatly improve the salvage rate. Consequences of either delay in intervention or due to referral usually lead to testicular loss, and may attract litigation.

Conclusion

Testicular torsion is a urological emergency that requires prompt intervention to salvage the affected testes. Salvage rate is 98% when diagnosis and definitive treatment is performed within 6 hours. In view of the delays that are commonly experienced in our healthcare care system, knowledge of this condition and the procedure of manual detorsion will greatly improve the salvage rate in our set up. The health professional will also refer the patients early for definitive management where there is limitation of facilities for prompt surgical intervention.

Acknowledgements

To the Moi and Referral Hospital Management for giving permission to publish my experience in managing the three patients reported in this publication.

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