VOLUME-8, ISSUE-3, MARCH-2019 • PRINT ISSN No 2277 - 8160

Original Research Paper

General Surgery

TESTICULAR TORSION – A CASE SERIES

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KEYWORDS : Testicular Torsion, Orchidopexy, Orchidectomy

Introduction:
Testicular torsion refers to the torsion of the spermatic cord structures and subsequent loss of the blood supply to the ipsilateral testicle. This is a surgical emergency; early diagnosis and treatment are vital to save the testicle and preserving future fertility.[1] The rate of testicular viability decreases significantly after 6 hours from onset of symptoms.[2]Testicular torsion is primarily a disease of adolescents and neonates. It is the most common cause of testicular loss in these age groups. However, torsion may occasionally occur in men 40-50 years old.[3]

Surgical treatment may prevent further ischemic damage to the testis. Diagnosis of testicular torsion is clinical, and diagnostic testing should not delay treatment.

Torsion can be intravaginal torsion and extravaginal torsion. Causes of Testicular torsion can be due to anomalies like bell clapper deformity, trauma, cryptorchidism, sudden contraction of the cremasteric muscles, testicular malignancy[5]. Occurs in about 17% of males[4]and is bilateral in 40%.

Torsion should be differentiated from epidydimo orchitis, testicular hematoma post trauma, complications of hydrocele etc. Ultrasound with Doppler will help in the differentaion. The TWIST (Testicular Workup for Ischemia and Suspected Torsion) scoring system was developed for the purpose of determining the risk of testicular torsion on clinical grounds, thus decreasing the indication for ultrasound.[6]

Ultrasonographic findings suggestive of acute testicular torsion include the following[7]:
- Absent or decreased blood flow in the affected testicle
- Decreased flow velocity in the intratesticular arteries
- Increased resistive indices in the intratesticular arteries
- Hypervascularity with a low resistance flow pattern (after partial torsion-detorsion)

Effective diagnosis and intervention at the early stage will prevent or help in avoiding orchidectomy.

Aim of the study: To study the clinical presentation, management of diagnosed cases of testicular torsion.

Methodology: This is a case series on testicular torsion done in patients admitted to Narayana General Hospital with complaints of scrotal pain during the period from August 2016 to February 2019.

History, clinical examination, investigations, management process were recorded and analysed for the study purpose.

Observations and results: During the study period about 15 cases were studied.

Table no 1: Age distribution of the cases

Age in years	No of cases	Percentage
11-20	4	27
21-30	2	13
31-40	3	20
41-50	6	40
Total	15	100

Table no 2: Clinical Presentation

Presentation	No of cases	Percentage
Scrotal pain	15	100
Swelling	7	47
Fever	4	27

Table no 3: Duration of symptoms

Duration	No of cases	Percentage
<1day	4	27
1-3 days	7	46
>3days	4	27

Table no 4: Management of cases

Management	No of cases	Percentage
Orchidectomy with orchidopexy	11	73
Orchidopexy alone	4	27

Discussion:
In the present study majority of the cases were in the age group of 41- 50 years. All cases had scrotal pain and cases with delayed presentation had fever and swelling. Only 4 cases presented before a day and 46% cases presented between 1- 3 days and 27% of cases presented more than 3 days. Only 4 cases had early diagnosis and had bilateral orchidopexy where as the remaining cases who presented late were treated outside by non medical persons conservatively and presented with complications like testicular gangrene and abscess and had orchidectomy on the affected side and orchidopexy on the contralateral side.

Chu and colleagues noted that postoperative viability occurred in 95% (19/20) versus 67% (8/12) of patients with ischemia times of 24 hours or less and more than 24 hours, respectively. Atrophy occurred in 67% (12/18) versus 83% (10/12) of these groups, respectively.[8]

Grimsby and colleagues prospectively studied 56 children with torsion to determine predictors of atrophy. All underwent an orchiopexy irrespective of intraoperative findings. Grimsby and colleagues found that a black or hemorrhagic testis 5 minutes after detorsion, pain duration of longer than 12 hours, and heterogeneous parenchyma on preoperative US were associated with significant testis volume loss on follow-up US compared with a normal testis. All patients with a black or hemorrhagic testis had more than 80% volume loss.[9] **Conclusion:** testicular torsion is a acute surgical emergency and needs immediate intervention to prevent loss of testis and fertility. So all acute scrotal conditions should be considered as torsion and should be evaluated by USG Doppler to rule out torsion. Orchidopexy of the contralateral testis is needed to prevent torsion in the contralateral side.

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