An Epidemiological Study of Torsion Test is in A Single Institution

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ABSTRACT:- Torsion testis is a surgical emergency. Earlier the surgery to untwist the testis can be undertaken, better the outcome. All the existing data regarding torsion testis are according to the western standards. The study was undertaken to determine the epidemiology of torsion testis in a single institution in South Tamilnadu, India.

Keywords: - emergency, male, scrotum, testis, torsion

I. INTRODUCTION

Testicular torsion is a time-sensitive ischemic process for which rapid diagnosis and intervention are necessary to enhance the likelihood of testicular salvage.

All the existing data regarding torsion testis are according to the western standards.

The study was undertaken to determine the epidemiology of torsion testis in a single institution in South Tamilnadu, India

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III. STUDY METHODOLOGY

50 Patients admitted to Govt. Rajaji Hospital with the diagnosis of torsion testis were taken for this observational study from July 2018 to December 2018. The Following parameters were analysed.

- 1) Age
- 2) Side of involvement
- 3) Hours since onset of pain and presentation at hospital
- 4) Number of patients with history of trauma
- 5) Patients in whom torsion knot was demonstrable
- 6) Time between admission and emergency surgery
- 7) Intraop findings
- 8) Number of patients for whom orchidectomy was done

RESULTS

AGE:

All patients presented were over the age of fifteen. Majority of patients(41 patients) fell between the ages 16 and 22 years.(TABLE 1)

SIDE OF INVOLVEMENT:

Side of involvement was also taken as a epidemiological parameter. Left side was involved in 22 of the patients and right side was involved in 28 of the patients. (TABLE 2)

HOURS SINCE ONSET OF PAIN AND PRESENTATATION AT HOSPITAL:

Most patients(43 patients) presented to the hospital within three hours of onset of pain. The reasons of delayed presentation included poor connectivity, lack of knowledge and native medications.(TABLE 3)

NUMBER OF PATIENTS WITH HISTORY OF TRAUMA:

Among the sample population only a few patients(5 patients) presented with a history of trauma to the scrotum.(TABLE 4)

PATIENTS IN WHOM TORSION KNOT WAS DEMONSTRABLE:

Radiological investigations especially ultrasound of the scrotum to demonstrate torsion knots for the diagnosis of torsion testis was used. Torsion knots were demonstrated in a significant amount of the population.(34 patients)(TABLE 5)

TIME BETWEEN ADMISSION AND EMERGENGY SURGERY:

Rapid assessment and plan for surgery enhances testicular salvage. Most patients(36 patients) were taken up for surgery in less than three hours. (TABLE 6). The delay in taking up of surgery was due to causes like non availability of attender for the patient and the presence of LRI leading to delay in assessment for anaesthesia.

INTRAOP FINDINGS:

Intraop findings of testicular gangrene mandate orchidectomy. In twisted and congested testes warm pad application and 100% oxygen may revert pregangrenous changes.(TABLE 7)(Fig 1, Fig 2)

NUMBER PATIENTS FOR WHOM ORCHIDECTOMY WAS DONE:

Orchidectomy is indicated in almost all the patients with gangrene. Failure to revert to non gangrenous state after application of warm pads and 100% oxygen needs orchidectomy after consent which is usually obtained from the patient and his parent preoperatively. (TABLE 8)

All patients in whom either orchidectomy was done or Testis was preserved underwent an orchidopexy of the opposite side to prevent the torsion of the opposite side in the future.

DISCUSSION

Torsion testis is a frequently encountered emergency in a surgical casualty. A systematic analysis of the clinical entity aids in better provision of care with long term benefits and may defer unwanted morbidity. Most patients encountered were between the ages 16 and 22. Its presentation was rather restricted in elderly age group. Most patients presented to the casualty within three hours of onset of pain. Lacks of connectivity, ignorance, native medication were associated with delayed presentation. Very few patients presented with history of trauma. In most of such cases, trauma as the cause of torsion could not be reliably established. Clinical examination and ultra sonogram of the scrotum were mainly used in the diagnosis of torsion. Demonstration of torsion knots in the ultra sonogram was possible in many cases. The likelihood of testicular salvage is nearly 100% if the time interval between the onset of torsion and detorsion(spontaneous or surgical) is less than 6 hours. Most patients were taken for emergency surgery within 3 hours since admission at our institution. Delay in surgery was done. Patients in whom there was congestion with discoloration a trial with warm pad application and 100% oxygen was given. If pregangrenous changes revert then testicular salvage procedure in form of bilateral orchidopexy was performed. No particular side predilection was demonstrated. All cases underwent orchidopexy of the opposite side.

IV. FIGURES AND TABLES Table 1 – Age of patients	
Age between 16 and 22 years	41
Age greater than 22 years	9

Table 2 - Side of Involvement	
Left	22
Right	28

Table 3 – Hours since onset of pain and Presentation at hospital

< 3 hours	43
>3 hours	7

Table 4 – Patients with History of Trauma	
History of trauma	5
No history of trauma	45

 Table 5 – Number of patients in whom torsion knot was demonstrable

 Torsion knot demonstrable
 34

Torsion knot not demonstrable	16

Table 6 – Time between admission and emergency surgery

< 3 hours	36
>3 hours	14
>5 Hours	14

 Table 7 – Intraoperative Findings

Gangrenous	44
Not gangrenous	6



Fig 1 – gangrenous testis – orchidectomy done



Fig 2 – testis viable- only orchidopexy done

Table 8 - Number of patients in whom Orchidectomy was done

Orchidectomy done	36
Orchidectomy not done	8

CONCLUSION

This study demonstrates that Early identification and Early operative intervention is the key to testicular salvage in case of torsion testis. Also it implies the need for health education and awareness among school going children and young adults about acute onset scrotal pain and the need to do Scrotal USG in all cases of scrotal pain.

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