

Examine the Causes of Acute Scrotal Pain and Treatment Following to this Malignant Disorder

Causes of Acute Scrotal Pain with Malignant Disorder

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ABSTRACT

Objective: To determine the causes of acute scrotal pain and treatments following to this malignant disease for providing better treatment to the patients.

Study Design: Prospective study

Place and Duration of Study: This study was conducted at the Department of Urology, Bolan Medical Complex Hospital, Quetta from 1st July 2017 to 31st December 2017.

Materials and Methods: In this study, we included 105 patients having acute testicular pain were included. Patient's ages were ranging between 10 years to 60 years. Those occurring incidence <6 hours and a history of testicular torsion undergo urgent exploration and those examined with a history of >6 hours and <6 hours but clinically examination of testicular torsion undergone doppler ultrasonography before surgical treatment.

Results: Out of all 105 patients, 52 (49.52%) patients were ages < 20 years, 25 (23.81%) patients were ages between 20 to 34 years, 15 (14.29%) patients had an ages between 35 to 49 years while rest 13 (12.38%) patients were ages > 49 years. 48 (45.71%) patients presented with less than six hours while 57 patients had presented with more than six hours. Findings of dopler ultrasound was noted as testicular torsion, Torsion of appendix testis, Epididymo orchitis, Orchitis, Trauma, infected hydrocele, Strangulated inguinal hernia and Idiopathic scrotal pain in 8, 2, 45, 9, 10, 13, 02, 16 patients respectively.

Conclusion: It is concluded that, use of dopler ultrasound for diagnoses acute scrotal pain is very useful method to diagnose accurately. The ratio of testicular tortion is very high in patients ages less than 20 years.

Key Words: Acute scrotal pain, Epididymo-orchitis, Testicular torsion

Citation of articles: Tareen SM, Nasir AR. Examine the Causes of Acute Scrotal Pain and Treatment Following to this Malignant Disorder. *Med Forum* 2018;29(7):48-50.

INTRODUCTION

World-wide, acute scrotal or testicular pain is most frequent urological problem found in urology departments. It is very important that the diagnosing of this malignant disease should be accurate and timely, because unidentifying and delay may lead to severe damage to the testis.¹ Acute scrotal pain is a medical emergency acquiring urgent treatment to overcome the testicular torsion.² The time on onset, age group, clinical examination and ultrasonography examination are effected characteristics which helps in examination the causes of acute scrotal pain.³ The physical examination must should be accurate examination of the abdomen and inguinal region.⁴ Nonurological causes of scrotal pain must be also considered in which peritonitis, rupture abdominal aortic aneurysm, and

referred scrotal pain. Other diagnoses in which Henoch-Schonlein purpura, testicular tumor and lower back strain. Henoch-Schonlein purpura is a systemic vasculitis that commonly affects patients aged less than and equal to twenty years and mostly found in children having ages 4 to five years and is reported to involve the scrotum in 2 to 38% of patients and if it misdiagnosed than required a urgent surgical exploration.⁵

Testicular torsion is one of the most frequent medical emergency that acquired urgent surgical treatment. The ratio of testicular tortion is 1/4000 male population and mostly observed in males having ages less than 25 years.⁶ Epididymitis is another commonly found cause of acute scrotal pain. As per results of DCPAH data (disease control prevention ambulatory health care), epididymitis resulted in 1 out of one hundred and forty four patients whom ages between 18 years to 50 years.⁷ Epididymitis required urgent surgical treatment if there is specific point tenderness on examination.⁸

Epididymis-orchitis is an inflammation of the epididymis and testis examined by clinical observation and ultrasonography.⁹ A study conducted by Holland et al, reported that chronic scrotal pain can be idiopathic in nature.¹⁰

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Received: January, 2018;

Accepted: March, 2018

This research was conducted to evaluate the causes of acute scrotal pain by using Doppler ultrasound and its treatments, so that better treatment may be provided to effected patients.

MATERIALS AND METHODS

This prospective study was conducted at Department of Urology, Bolan Medical Complex Hospital, Quetta from 1st July 2017 to 31st December 2017. In this study, we included 105 patients having acute testicular pain were included. Patient’s ages were less than 20 years to 60 years. After taking the informed consent from all the patients, detailed history was examined. Patients having pain duration > 48 hours and those had treated inguinal surgery in last one month and those having pain lumber region radiating to groin and scrotum was excluded from this study. Those occurring incidence <6 hours and a history of testicular torsion undergo urgent exploration and those examined with a history of >6 hours and <6 hours but clinically examination of testicular torsion undergone Doppler ultrasonography before surgical treatment. Dopler ultrasound examination was done by the expert radiologist. All the data was analyzed by statistical computer software SPSS 17.0.

RESULTS

Out of all 105 patients, 52 (49.52%) patients were ages < 20 years, 25 (23.81%) patients were ages between 20 to 34 years, 15 (14.29%) patients had an ages between 35 to 49 years while rest 13 (12.38%) patients were ages > 49 years (Table 1). 48 (45.71%) patients presented with less than six hours while 57 patients had presented with more than six hours. Findings of dopler ultrasound was noted as testicular torsion, torsion of appendix testis, Epididymo orchitis, orchitis, trauma, infected hydrocele, Strangulated inguinal hernia and Idiopathic scrotal pain in 8, 2, 45, 9, 10, 13, 02, 16 patients respectively shown in Table 2. Time duration of symptoms were note as 9±5, 12±2, 17±15, 16±12, 10±5, 28±14, 4±5, 23±12 as testicular tortion, tortion of appendicular testis, epididymo orchitis, orchitis, trauma, infected hydrocele, strangulated hernia and idiopathic scrotal pain respectively. Out of all patients 45 patients had epididymo-orchitis and referred for medicated treatment. All the patients had complete recovery after suitable treatments (Tables 2-4).

Table No.1: Age-wise distribution of the patients

Age (years)	No.	%
<20	52	49.52
20-34	25	23.81
35-49	15	14.29
>49	13	12.38

Table No.2: Presented duration of patients

Presentation (hours)	No.	%
< 6	48	45.71
> 6	57	54.29

< 6	48	45.71
> 6	57	54.29

Table No.3: Diagnosis of patients having acute scrotal pain

Diagnosis	No.	%
Testicular torsion	8	7.62
Testicular appendix testis	2	1.90
Epididymo-orchitis	45	42.86
Orchitis	9	8.57
Trauma	10	9.52
Infected hydrocele	13	12.38
Strangulated inguinal hernia	2	1.90
Idiopathic scrotal pain	16	15.24

Table No 4: Distribution of symptoms in hours

Symptoms	Mean±SD (hours)
Testicular torsion	9±5
Testicular appendix testis	12±2
Epididymo-orchitis	17±15
Orchitis	16±12
Trauma	10±5
Infected hydrocele	28±14
Strangulated inguinal hernia	4±5
Idiopathic scrotal pain	23±12

DISCUSSION

Acute scrotal pain is the frequent urological problem found in medical emergencies.¹¹ Early accurate and prompt diagnosis of this malignant disorder helps to provide better treatment and to reduce the morbidity.¹² Age and time duration of the symptoms are important factors and may help us in examination. A study conducted by Eaton et al¹³ reported that bell clapper deformity was a important observation in testicular torsion.

In our study, we found out of all 105 patients, 52 (49.52%) patients were ages <20 years, 25 (23.81%) patients were ages between 20 to 34 years, 15 (14.29%) patients had an ages between 35 to 49 years while rest 13 (12.38%) patients were ages >49 years .The most common age found in testicular torsion is 11 to 14 years reported by Mattias et al.¹⁴ We observed that the causes of acute scrotal pain by using Dopler ultrasound was not as dopler ultrasound was noted as testicular torsion, Torsion of appendix testis, epididymo orchitis, orchitis, trauma, infected hydrocele, strangulated inguinal hernia and Idiopathic scrotal pain in 8, 2, 45, 9, 10, 13, 02, 16 patients respectively.

In this study, the mean duration of symptoms were 12 hours. 5 torted testis were observed to be non viable. Some other researches shows that the use of Dopler Ultrasound is very helpful in diagnosing testicular torsion.¹⁵⁻¹⁷ In our research 5 patients with a duration > 6 hours were observed on ultrasound and there was no any misdiagnosed. We found only 1 case of mild and blunt trauma out of testicular tortion. Trauma is not

commonly observation and only found in teenagers with ratio of 5 to 6%.¹⁸

In our study, we observed that cremestic reflex was not found in all patients but it was found that 4 patients were latterly diagnosed to have epididymo-orchitis. Cremestic reflex is the sensitive but not specific sign of the testicular torsion.¹⁹

Out of all patients 45 patients had epididymo-orchitis and referred for medicated treatment. Epididymo-orchitis is an significant differential diagnoses of acute scrotal pain. Use of ultrasound is very useful to diagnose accurately. Some other studies resulted that use of ultrasonography is very important in differentiating testicular torsion and acute epididymo orchitis.²⁰⁻²¹

Moreover, this study is not sufficient due to small number of cases. We should have to do more work regarding this malignant disorder to overcome the morbidity and to provide better treatment to the patients.

CONCLUSION

Acute scrotal or testicular pain is commonly found in urological departments. In this study, we concluded that use of dopler ultrasound for diagnoses acute scrotal pain is very useful method to diagnose accurately. The ratio of testicular torsion is very high in patients ages less than 20 years and if strong and accurate examination was established by clinically it may reduce to delay in treatment and severe damage of testis.

Author's Contribution:

Concept & Design of Study:	Sultan Mohammad Tareen
Drafting:	Sultan Mohammad Tareen
Data Analysis:	Abdul Razaque Nasir
Revisiting Critically:	Abdul Razaque Nasir
Final Approval of version:	Sultan Mohammad Tareen

Conflict of Interest: The study has no conflict of interest to declare by any author.

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