ORIGINAL ARTICLE

Characteristics of Testicular Torsion in Arifin Achmad Regional General Hospital, Pekanbaru, Riau Province, Indonesia

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ABSTRACT

Background: Testicular torsion is an abnormality disease in the testicle because torsion of the spermatic cord resulting in occlusion and strangulation vascularization of the veins and arteries to the testes and epididymis. This study aimed at describing the characteristics of testicular torsion of urology patients based on age, clinical symptom, physical examination, supporting examination, duration and treatment.

Materials and methods: We reviewed medical records of urology patients testicular torsion in Arifin Achmad Regional General Hospital, Pekanbaru, Riau Province, Indonesia in 2011 - 2016. Statistical analysis of univariate was used. Approval on the study was obtained from the Ethical Review Board for Medicine and Health Research, Medical Faculty, University of Riau.

Results: There were 6 patients in this study in which testicular torsion was in 11-20 year old age group in 50% patients. The most frequent clinical symptom was scrotal pain in 83.3%. The physical examination of cremaster reflex was absent in 100% patients. The most frequent supporting examination was conventional scrotal ultrasonography in 66.6% patients. The duration of testicular torsion in > 12 hour was in 83.3%. The most frequent management was orchidectomy in 83.3% patients.

Conclusion : Testicular torsion in our hospital was characterized by mostly in young age, clinical symptom was scrotal pain, Cremaster reflex was negative in 100% in physical examination, supporting examination was conventional scrotal ultrasonography, duration symptom was in > 12 hours and managed by orchidectomy.

Keywords: Clinical symptom, Physical examination, Testicular torsion

INTRODUCTION

Testicular torsion is an abnormality in the testes because torsion of the spermatic cord resulting in occlusion and strangulation vascularisation of the veins arteries to the testes and epididymis. Testes can be infark and atrophy if more than 4-6 hours.[1] Testicular torsion is emergency in urology in young men with incidene rates 1:4000 people in < 25 year old. Study in America, patient of testicular torsion is 8.6/ 100.000 young age.[2] Testicular torsion are born with a higher risk for the condition although they may not know it. Normally, the testicles can't move freely inside the scrotum. The surrounding tissue is strong and supportive. Men and boys who experience torsion sometimes have weaker connective tissue in the scrotum. This is called a "bell clapper" deformity. If testicles have a bell clapper deformity, your testicles can move more freely in the scrotum[4]. This movement increases the risk of the spermatic cord becoming twisted. Testicular torsion can also occur after an injury to the groin. Rapid growth during puberty may also cause the condition. The condition can occur anytime. Testicular torsion can occur when a man is sleeping or when he is engaging in physical activity. Sports injuries can cause torsion of the testes. As a preventive step, a man can wear sport. Testicular torsion usually occurs in only one testicle. Bilateral torsion, when both testes are simultaneously affected, is extremely rare[5].

Pain and the swelling the scrotal sac are the main symptoms of testicular torsion. The onset of pain may be quite sudden, and the pain can be severe. Swelling may be limited to just one side, or it can occur in the entire scrotum. You may notice that one testicle is higher than the other. Some men also experience: dizziness, nausea and vomiting[3].

Torsion of the testes is a medical emergency, but many adolescent males are hesitant to say they're hurting or seek treatment right away. You should never ignore sharp testicular pain. It's possible for some men to experience what's known as intermittent torsion. This causes a man to have a testicle twist and untwist. Because the condition is likely to

recur, it's important to seek treatment, even if the pain becomes sharp and then subsides[7].

Surgical repair is usually required to treat testicular torsion. In rare cases, your doctor may be able to untwist the spermatic cord by hand. This procedure is called "manual detorsion."Surgery is performed as quickly as possible to restore blood flow to the testicles. If blood flow is cut off for more than six hours, testicular tissue can die. The affected testicle would then need to be removed. Surgical detorsion is performed under general anesthesia[6]. You will be asleep and unaware of the procedure. The doctor will make a small incision in your scrotum and untwist the cord. Tiny sutures will be used to keep the testicle in place in the scrotum. This prevents rotation from occurring again. The surgeon then closes the incision with stitches[8].

METHOD

We reviewed medical records of testicular torsion patients in Arifin Achmad Regional General Hospital, Pekanbaru, Riau Province, Indonesia in 2011 – 2017. The research variable were age, clinical symptom. Phisycal Statistical analysis of univariate was used. Approval on the study was obtained from the Ethical Review Board for Medicine and Health Research, Medical Faculty, University of Riau.

RESULTS

There were 6 testicular torsion patients in this study.

Table 1: Frequency distribution of testicular torsion patient according to age

Age (year)	Cases (%)
1-10	1 (16.7)
11-20	3 (50)
21-30	1 (16.7)
31-40	1 (16.7)

Table 2: Phisycal examination of testicular torsion

Physical examination	Cases (%)
Reflex cremaster absent	6 (100)
Prehn sign	3 (50)
Angle sign	2 (3.4)
Tenderness	4 (66.6)

Table 3: Supporting examination in testicular torsion

Supporting examination	Cases (%)
Scrotal USG	
Convesional scrotal	6 (100)
Color Doppler USG	4 (66.6)
Nuclear scinthygraphy	2 (33.4)

Table 4: Clinical symptom in testicular torsion patients

Clinical symptom	Cases (%)
Scrotal pain	5 (76.1)
Scrotal swelling	4 (15.2)
Nausea and vomitus	1 (8.7)
Total	92 (100)

Table 5: Physical examination in testicular torsion patient

Duration of testicular torsion	Cases (%)
< 4 jam	1 (16.7)
>4 jam	0 (0)
8-12 jam	0 (0)
>12 jam	5 (83.3)
Total	6 (100)

Table 6: Treatment of testicular torsion

The procedures	Cases (%)
Manual detorsion	1 (16.6)
Eksplorasi testis	6 (100)
Orchidectomy	5 (83.3)
Sinistra	3 (50)
Dextra	2 (33.4)
Orchidopexy	1 (16.6)

DISCUSSIONS

The study results showed the largest number of patients according to age was 11-20 year old age group in 33(50%) patients, and the least one was in the 1-10, 21-30, and 31-40 year old age. 10-20 year old age. Characteristics of patients by age in this study suited a study by Ashok Suryabhanji Gajbhiye (2016) showed that testicular torsion were mostly (56.7%) in 11-20 year age group[18]. This movement increases the risk of the spermatic cord becoming twisted. Testicular torsion can also occur after an injury to the groin. Rapid growth during puberty may also cause the condition. The condition can occur anytime. Testicular torsion can occur when a man is sleeping or when he is engaging in physical activity. Sports injuries can cause torsion of the testes. As a preventive step, a man can wear sport. Testicular torsion usually occurs in only one testicle.[5]

The study result showed the scrotal pain is the most clinical symptom in 5 (83,3%) patients. This study suited a study by CT Khartikeyan(2016) showed the most (95.1%) symptom of testicular torsion. Because occlusion and strangulation vascularization of the veins and arteries decrease to the testes and epididymis[1] and cause occlusion, ischemia-reperfusion injury and mediation from reactive oxygen[21].

The study showed reflex cremaster were absent is the most physical examination in testicular torsion patient. This study suited a study by Suryabanji Gajbhiye (2016) showed the most (93,4%) physcal

examination in testicular torsion. The cremasteric reflex, which is elicited by pinching the medial thigh, causes elevation of the testicle. Presence of the reflex suggests, but does not confirm, the absence of testicular torsion. Comparison of the affected and unaffected sides may help delineate abnormal clinical findings, although scrotal edema and patient discomfort may limit physical examination. Patients in whom the components of the spermatic cord can be distinctly appreciated, whose testes are normally oriented, who have minimal to no scrotal edema, and who have no systemic symptoms (particularly with examination) are unlikely to have acute testicular torsion[28,29].

This study result showed most supporting examination used conventional scrotal ultrasonography (66,6%) This study showed duration testicular torsion is > 12 hour. Because patient are late came to the hospital and more than 4 hour[24].This study result showed, the treatment of testicular torsion was mostly total orchidectomy 5 (83,3%) patient. This result suited study by Dr. Charlos Baeza Herrera (2008) in 43 (93,47%) patient. The treatment of testicular torsion is orchidectomy because testes can be infarcted and atrophy if more than 4-6 hours[1].

CONCLUSIONS

Testicular torsion in our hospital characterized by mostly in young age, clinical symptom was scrotal pain, physical examination of cremaster reflex was absent, supporting examination of conventional scrotal ultrasonography, duration of symptoms > 12 hours and the management by orchidectomy.

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