



Rupture of testicle accompanying multiple traumas: A case report

 Muhammed Ekmekyapar¹,  Muhammet Gokhan Turtay¹,  Sukru Gurbuz¹,  Serdar Derya²,  Hasan Gokce¹,  Omer Faruk Solgun¹

¹Department of Emergency Medicine, Faculty of Medicine, Inonu University, Malatya, Turkey

²Department of Emergency Medicine, Training and Research Hospital, Malatya, Turkey

Copyright@Author(s) - Available online at www.annalsmedres.org

Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License



Abstract

In this case report, we aimed to present an 18-year-old male patient who had ruptured testicle after severe testicular trauma that developed due to a motorcycle accident. An eighteen-year-old male patient was brought to the emergency service after a motorcycle accident. There were open fractures in the left arm and left leg. The scrotum was ruptured, both testicles were outside, and the right testicle was ruptured. The patient was underwent emergency surgery for intraabdominal hemorrhage and liver laceration by general surgery. Also urology joined the operation. Urology carried out right orchiectomy and left testicular fixation on the patient. Although rupture of testicles is a rare condition, it may accompany the diagnosis in patients with multiple traumas. Early urology consultation should be sought to be able to save testicles and minimize complications.

Keywords: Multiple traumas; rupture; testicle

INTRODUCTION

Testicular trauma is rare, as it is protected by the dependent and mobile nature of the scrotum, but serious testicular injury; It causes many problems that can affect fertility, contribute to hypogonadism, lead to the production of antisperm antibodies and affect social trust (1). The most common causes of testicular injuries, which usually result from blunt traumas, are sports injuries (2). Usually the way of its formation is a direct blow to the scrotum, which compresses the testicles against pubic symphysis (3). In this case report, we aimed to present an 18-year-old male patient who had ruptured testicle after severe testicular trauma that developed due to a motorcycle accident.

CASE REPORT

An eighteen-year-old male patient was brought to the emergency service within 2 hours after a motorcycle accident. The physical examination of the patient revealed a conscious, cooperating, and oriented patient. Regarding the vital signs of the patient, blood pressure was 90/50 mmHg, pulse was 110/min, respiratory rate was 22/min, and temperature was 36.6 °C. There was widespread sensitivity at the abdominal examination, but there were no defenses or rebounds. There was sensitivity in anteroposterior and lateral compression

tests of the pelvis. There were open fractures in the left arm and left leg. The scrotum was ruptured, both testicles were outside, and the right testicle was ruptured (Figure 1). Apart from these, his physical examination was normal. Hemoglobin was 13.7 gr/dL, and hematocrit was 37.6% in the blood tests performed on the patient. A drop was observed in hemoglobin and hematocrit levels in follow-up. In biochemical blood tests, aspartate aminotransferase was 476 U/L, alanine aminotransferase was 534 U/L, and lactate dehydrogenase was 1337 U/L. Abdominal ultrasonography (USG), one of the imaging methods, showed a heterogeneous hyperechoic focal area (laceration) in the right lobe of the liver and minimal liquid in the perisplenic and abdominal lower quadrants. In scrotal color Doppler USG exam; it has been reported that the blood flow of the right testicle is not monitored and the parenchymal integrity is impaired, the blood flow of the left testicle is monitored and the parenchyma cannot be clearly selected. Contrast-enhanced abdominal computed tomography (CT) scanning showed laceration in liver segments 4–7 (Figure 2), perihepatic and perisplenic liquid. A displaced fracture was observed in the left forearm graph and CT of the left radius and ulna mid-distal diaphysis segments of the patient. A displaced fracture was observed in the left leg graph and CT of the

Received: 25.06.2020 **Accepted:** 01.12.2020 **Available online:** 29.12.2020

Corresponding Author: Muhammet Gokhan Turtay, Department of Emergency Medicine, Faculty of Medicine, Inonu University, Malatya, Turkey **E-mail:** mgturtay@gmail.com

left mid diaphysis segments of the patient. In the pelvis CT of the patient, displaced fracture lines were observed on the right side of the sacrum and in bilateral pubis inferior segments. The patient was underwent emergency surgery for intraabdominal hemorrhage and liver laceration by general surgery. The patient was taken to surgery within 3 hours after being brought to the emergency room. Also urology joined the operation. Urology carried out right orchiectomy and left testicular fixation on the patient.



Figure 1. The ruptured right testis

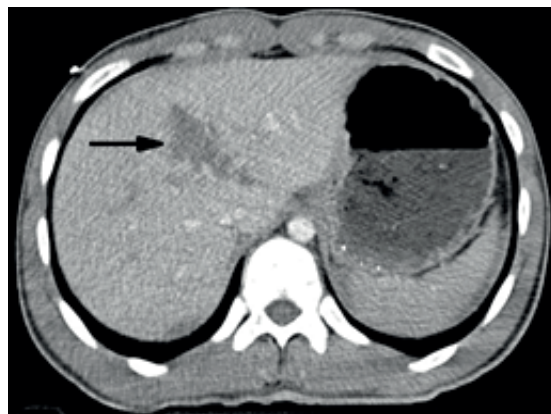


Figure 2. The liver laceration

DISCUSSION

Testicles are the organs that are fewer affected by traumas due to both localization and mobilization. It accounts for less than 1% of all traumatic injuries (4). Testicular rupture is a very rare condition and can be described as the disruption of the integrity of the testicle tunica albuginea. There is hemorrhage in the testicular rupture and the testicular contents are observed overflow to the scrotal sac (5). Approximately 85% of testicular injuries results from blunt traumas and the reason for most testicular injuries is sports related injuries (2). There may also be penetrating or blunt injuries as motorcycle accidents (6,7). Our case was a patient with multiple traumas due to motorcycle accident. In addition, our patient had a rare seen testicular rupture.

USG is a very important imaging method in the diagnosis of testicular rupture and determining the surgical need. It has determined the need for surgery in cases of penetrating scrotal injury with a sensitivity of 100% and specificity of 84.6%. (8). In fact, bedside emergency USG can be an important diagnostic method to speed up evaluation and treatment in patients with testicular trauma (9). CT in the evaluation of inguinoscrotal pathologies and magnetic resonance imaging (MRI) in the evaluation of soft tissue are alternative image methods (8).

If rapid diagnosis is not made and not surgically repaired, testicular rupture can cause testicular atrophy and loss (10). Current management strategy for testicular rupture is surgical exploration and repair within 72 hours and surgical delay may decrease the salvage rate from 80–90% to 45–55% (11). Our patient was taken into operation approximately 5 hours after the accident. Maximum protection of living testicular tissue is important because subfertility, a late complication of testicular trauma, may develop (12).

CONCLUSION

A multidisciplinary approach is necessary for multiple traumas. Although rupture of testicles is a rare condition, it may accompany the diagnosis in patients with multiple traumas. Early urology consultation should be sought to be able to save testicles and minimize complications.

Conflict of interest: The authors declare that they have no competing interest.

Financial Disclosure: There are no financial supports.

REFERENCES

1. Addas F, Yan S, Hadjipavlou M, et al. Testicular rupture or testicular fracture? A case report and literature review. *Case Rep Urol* 2018;2018:1323780.
2. Morey AF, Metro MJ, Carney KJ, et al. Consensus on Genitourinary Trauma: External Genitalia. *BJU Int* 2004;94:507-15.
3. Redmond EJ, Mac Namara FT, Giri SK, et al. Blunt testicular trauma - is surgical exploration necessary? *Ir J Med Sci* 2018;187:1109-13.
4. Buckley JC, McAninch JW. Use of ultrasonography for the diagnosis of testicular injuries in blunt scrotal trauma. *J Urol* 2006;175:175-8.
5. Jeffrey RB, Laing FC, Hricak H, et al. Sonography of testicular trauma. *AJR Am J Roentgenol* 1983;141:993-5.
6. Cass AS. Testicular trauma. *J Urol* 1983;129:299-300.
7. Zechlinski J, Sharafinski M, Sudakoff G. Ruptured testicular yolk sac tumor. *Ultrasound Q* 2014;30:238-40.
8. Wang A, Stormont I, Siddiqui MM. A review of imaging modalities used in the diagnosis and management of scrotal trauma. *Curr Urol Rep* 2017;18:98.
9. Cannis M, Mailhot T, Perera, P. Bedside ultrasound in a case of blunt scrotal trauma. *West J Emerg Med* 2013;14:127-9.

10. Munter DW, Faleski EJ. Blunt scrotal trauma: Emergency department evaluation and management. *Am J Emerg Med* 1989;7:227–34.
11. Wang Z, Yang JR, Huang YM, et al. Diagnosis and management of testicular rupture after blunt scrotal trauma: A literature review. *Int Urol Nephrol* 2016;48:1967-76.
12. Kukadi AN, Ercole CJ, Gleich P, et al. Testicular trauma: potential impact on reproductive function. *J Urol* 1996;156:1643-6.