

# Testicular Ischemia in Patient with Acute Epididymitis: A Rare Complication for a Common Disorder

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## Authors' contributions

*This work was carried out in collaboration among all authors. Authors GY and BY analysed and performed the literature research. Authors MA, DM, DA and AR performed the examination and performed the scientific validation of the manuscript. Author GY was the major contributors to the writing of the manuscript. All authors read and approved the manuscript.*

## Article Information

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## Case Study

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## ABSTRACT

The Emergency Room Physician, Radiologist, and Urologist may face numerous diagnostic hurdles while dealing with an acute scrotum. Testicular infarctions have been documented as an uncommon but fatal epididymo-orchitis consequence. A colour Doppler ultrasound examination of the testes should be repeated, and a urology referral for possible admission and surgical exploration should be considered.

**Keywords:** Epididymitis; testicular ischemia; epididymo-orchitis; testicular infections.

## 1. INTRODUCTION

“The acute scrotum can provide many diagnostic challenges to the Emergency Room Physician, Radiologist and Urologist” [1]. “One of the commonest differentials for the acute scrotum is

an epididymo-orchitis, which can mimic the presentation of testicular torsion. Medical management is the mainstay and this includes antimicrobial treatment” [2,3]. “Testicular infarctions have been reported rarely as a catastrophic complication of epididymo-orchitis.

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Few case reports and case series have been written highlighting acute testicular infarcts progressing from routine epididymal and testicular infections” [4]. This case report study elucidated a case of acute scrotum in a 17 years old man.

## 2. CASE REPORT

A 17 years old young man presented to the emergency department with left scrotal pain and swelling for 3 days. His pain was intermittent and radiating to his left inguinal area. There had been no previous testicular torsion, testicular damage, or unprotected sexual intercourse. The scrotum was red at the time of presentation (Fig. 1). A testicular examination indicated edoema in the left testis, as well as acute palpable discomfort. Prehn’s test was equivocal from the examination and the cremaster reflex was minimal. A Doppler ultrasound was done which revealed no evidence of testicular torsion, enlarged left epididymis with heterogeneous echopattern and increased vascularity suggesting epididymitis, the ultrasound also revealed heterogeneous hypoechoic zone, without Doppler flow in the lower pole of the testis (Fig. 2).



Fig. 1. Scrotum

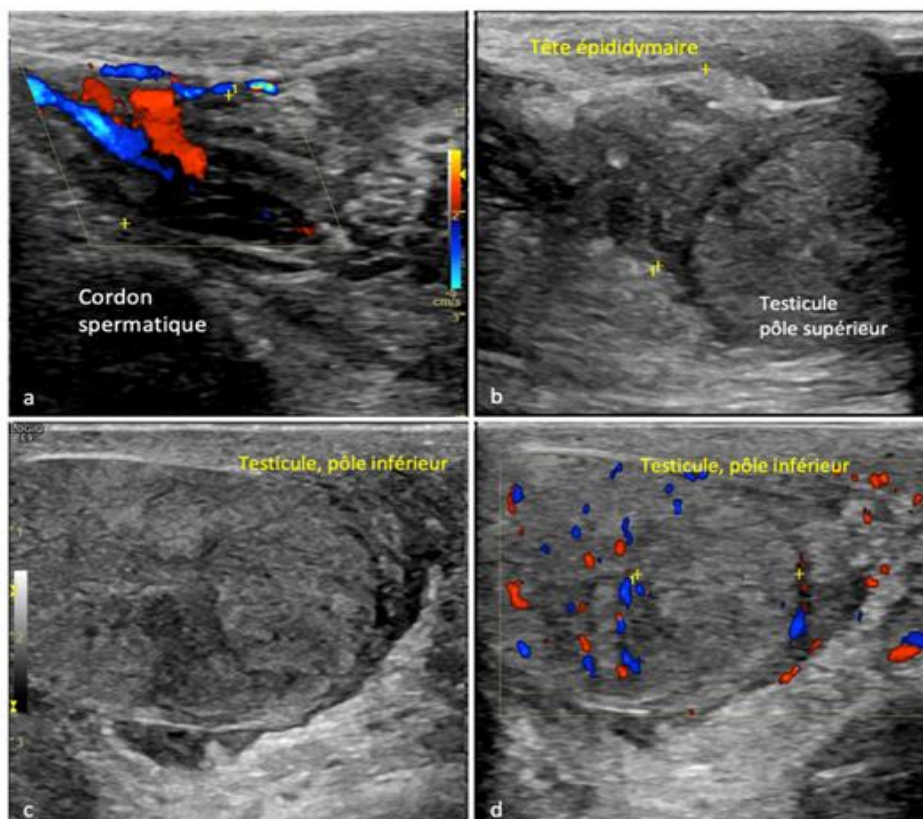


Fig. 2. Doppler ultrasound

We decided to perform left scrotal exploration, which showed an inflammatory aspect and enlargement of the left epididymis without spermatic cord twist and a necrotic lower pole of the testis (Fig. 3). A partial left orchidectomy and spermatic cord fasciotomy was performed

(Fig. 4). There were no complications during the surgery. The patient was entirely recovered, with a significant improvement in his overall health. After the surgery, the patient was given antibiotics and discharged the next day. The control ultrasound was normal.



**Fig. 1. Intraoperative photograph of scrotal exploration**



**Fig. 2. Partial orchidectomy**

### 3. DISCUSSION

“Epididymitis leading to testicular infarction is extremely rare. The testicular ischemic process can be segmental or diffuse, depending on the degree of vascular occlusion” [1]. “The pathogenesis of a testicular infarct due to epididymo-orchitis is poorly understood. Venous obstruction due to edema, bacterial toxin causing endothelial damage, inflammation of spermatic cord and thrombus formation are several pathogenesis of the testicular ischemia” [1,2].

“Strong evidence to support clinical features, which may predict a worse outcome, is limited. Features suggesting a lack of response to antibiotics include sepsis, pronounced scrotal edema, severe testicular pain and scrotal wall inflammation” [3]. “A positive urine culture has been cited as being a factor leading to increase complications such as testicular infarction” [4].

“Antibiotic therapy in epididymo-orchitis is usually with a combination of a third generation cephalosporin and a doxycycline to cover *Chlamydia Trachomatis*, or a quinolone”. Anticoagulation, antiplatelet, and thrombolytic medicines are among the other possible therapeutic choices. In order to save the testicle, spermatic cord fasciotomy may be considered. Testicular fasciotomy may seem an excessive option to an orchidectomy

### 4. CONCLUSION

Although rare, testicular infarction should be considered as a complication in patients with severe or unresolved epididymitis. A urologist

referral should be sought for probable hospitalisation and surgical exploration after repeated colour Doppler ultrasonography examinations of the testes.

### CONSENT

As per international standard or university standard, patients’ written consent has been collected and preserved by the author(s).

### ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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