

Neglected Testicular Torsion Complicated by Liquefactive Necrosis of the Testis in an Elderly Diabetic Patient: A Case Report

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Abstract

Case Report

Testicular torsion is a urological emergency requiring prompt diagnosis and management. Delayed presentation may lead to testicular necrosis and, in rare cases, severe infectious complications such as liquefactive necrosis of the testis with abscess formation. We report the case of a 71-year-old diabetic patient who presented with neglected left testicular torsion complicated by liquefactive necrosis of the testis. The patient underwent emergency surgical exploration, left orchietomy, drainage, and necrosectomy. This case highlights the importance of early diagnosis and the potential for severe infectious complications in delayed cases.

Keywords: Testicular torsion, Liquefactive necrosis, Abscess, Orchietomy, Scrotal emergency, Diabetes mellitus.

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1. INTRODUCTION

Testicular torsion is a time-sensitive surgical emergency caused by twisting of the spermatic cord, leading to ischemia and potential testicular loss. While it predominantly affects adolescents, it can occur at any age. Delay in diagnosis increases the risk of complications, including infection and liquefactive necrosis of the testicular tissue.

2. CASE PRESENTATION

A 71-year-old male presented with worsening left scrotal pain and swelling evolving over one week. His medical history was significant for type 2 diabetes mellitus for 15 years, treated with oral antidiabetic drugs, and benign prostatic hyperplasia managed with alpha-blockers. There was no history of prior similar episodes or high-risk sexual behavior.

Initially, the patient experienced left scrotal pain with swelling, for which he received analgesics and non-steroidal anti-inflammatory drugs. Due to progression of symptoms, he re-presented one week later with fever and severe scrotal pain.

On physical examination, the left hemiscrotum was enlarged, erythematous and warm. A purulent discharge was noted through a small fistulous opening.



Figure 1: clinical presentation

Scrotal Doppler ultrasound revealed:

- A non-vascularized left testis
- Two turns of the spermatic cord consistent with torsion
- Marked thickening of scrotal soft tissues with diffuse infiltration

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- Presence of fluid collection containing echogenic debris
- A localized abscess measuring approximately 23 mm adjacent to the fistulous opening

These findings were suggestive of left testicular torsion complicated by liquefactive necrosis and abscess formation.



Figure 2: Scrotal ultrasound

After obtaining informed consent, the patient was taken for emergency surgery. Intraoperative findings included:

- Purulent collection requiring drainage
- Two twists of the spermatic cord
- A non-viable left testis



Figure 3: intraoperative findings

A left orchiectomy was performed along with drainage and extensive necrosectomy.

3. DISCUSSION

Testicular torsion is a well-known urological emergency, classically affecting adolescents, but it may occur at any age, including elderly patients, in whom the diagnosis is often delayed. In older individuals, scrotal pain is more frequently attributed to infectious causes such as epididymo-orchitis, leading to misdiagnosis and inappropriate initial management, as observed in our case.

Delayed presentation significantly increases the risk of testicular ischemia and necrosis. Salvage rates dramatically decrease after 6 hours of symptom onset and become exceptionally low beyond 24 hours. In our patient, the one-week delay led to complete testicular devascularization and non-viability at the time of surgical exploration.

In this case, prolonged ischemia resulted in tissue necrosis followed by secondary infection, leading to liquefactive necrosis of the testis associated with abscess formation. Diabetes mellitus remains a significant contributing factor due to impaired immunity and microvascular alterations, which favor infection and delay healing.

The formation of an abscess and fistulization, as observed in our patient, reflects the progression of untreated necrotic tissue toward localized suppuration. Microbiological analysis identified *Escherichia coli*, a common pathogen in genitourinary infections.

Biologically, the patient presented with a marked inflammatory response (leukocytosis at 17,000/mm³ and CRP at 170 mg/L), consistent with severe infection.

Management in such cases requires:

- Prompt surgical exploration
- Removal of necrotic tissue (orchiectomy when necessary)

- Drainage of purulent collections
- Broad-spectrum antibiotic therapy adapted to culture results

Our patient initially received empiric antibiotic therapy (ceftriaxone, gentamicin, and metronidazole), later adjusted according to antibiogram results.

The favorable outcome highlights the importance of timely surgical intervention, even in advanced presentations. Early recognition remains crucial to prevent severe complications.

4. CONCLUSION

Neglected testicular torsion in elderly patients can lead to severe complications such as liquefactive necrosis of the testis and abscess formation. Early diagnosis and prompt surgical management are essential to reduce morbidity.

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