

Segmental testicular infarction following cysto-prostatectomy

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Abstract

Segmental (partial) testicular infarction is a very rare condition of unknown cause in more than 70% of cases. Several predisposing conditions have been described, but to our knowledge, this is the first documented case and often overlooked complication occurring as a result of cysto-prostatectomy. It usually presents in an acute manner resembling testicular torsion or epididymo-orchitis and is confirmed using ultrasonography. In some cases, it may present insidiously with no pain and may be confused with a testicular tumor due to the hypo-echoic features on imaging. In unclear situations, Doppler sonography shows vascularity and a magnetic resonance scan can be useful to distinguish between the two conditions.

Key Words: Cysto-prostatectomy, infarction, segmental, testicular

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INTRODUCTION

Segmental testicular infarction is a very rare and possibly underreported condition, with fewer than 50 cases documented in the literature.^[1] We report a rare case of this unrecognized complication occurring in a 62-year-old, following cysto-prostatectomy.

CASE REPORT

A 62-year-old man with a G2pT2 bladder transitional cell carcinoma and urethral invasion underwent an uneventful cysto-prostatectomy with urethrectomy and ileal conduit formation. His past medical history included gout and diverticular disease, and only Allopurinol was taken regularly. The patient denied a history of severe testicular pain, injury or sexually transmitted disease. He was unmarried with no plans to have children.

Postoperatively, there was no testicular pain but the scrotum remained swollen and indurated. Examination of the testicles was difficult as a result, but seemed grossly normal bilaterally with no tenderness. After 10 days, pus was expelled from the perineal wound and an ultrasound was requested to exclude a collection in view of the concomitant raised white cell count. Urine dipstick analysis was clear and he was commenced on an oral antibiotic.

The findings of the scrotal ultrasound are shown in Figures 1 and 2. A characteristic segmental infarction is confirmed by the hypo-echoic area with no blood flow on Doppler ultrasonography, affecting the upper two-thirds of the right testicle. The remainder of the right testis and the left testis showed normal echogenicity and vascularity. Subsequent testicular tumor markers were normal and the patient was managed conservatively.

DISCUSSION

Complete testicular infarction is a recognized consequence of torsion of the spermatic cord, incarcerated hernia, infection, trauma and vasculitis.^[2] Segmental testicular infarction, on the other hand, is a rare entity affecting older patients and is of unknown etiology in more than 70% of cases.^[3] Several predisposing conditions have been described, including sickle

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Figure 1: Segmental infarction affecting the right testis

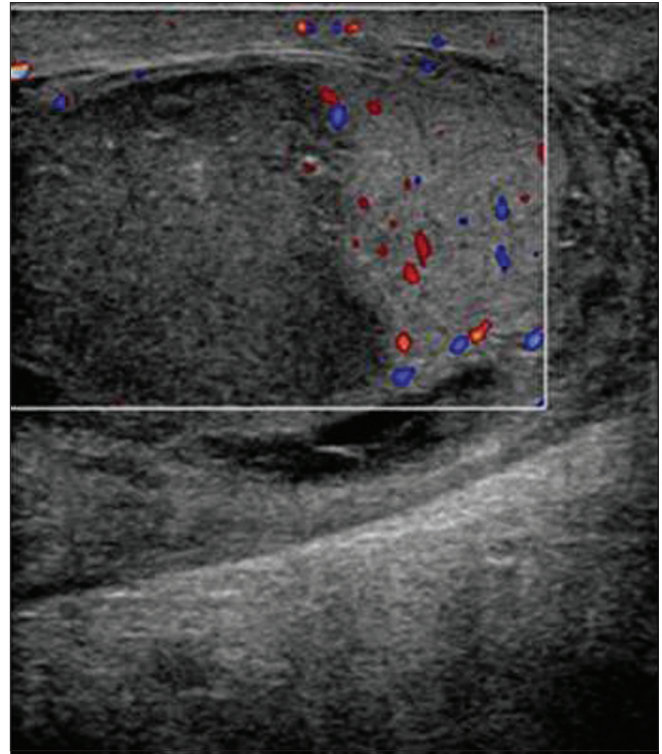


Figure 2: Absence of vascularity on Doppler sonography

cell disease, epididymo-orchitis, polycythemia, angiitis, intimal fibroplasias of the testicular artery and varicocelelectomy.^[2]

The presentation is typically with an acute scrotum consisting of pain and swelling, often mistaken for testicular torsion or epididymo-orchitis. Less commonly, it can present insidiously or with no pain, as in this case. Palpation of the testes is often unhelpful initially, but an indurated mass may be felt later on.

Scrotal ultrasound with color Doppler imaging is the investigation of choice. The area of infarction is typically round or wedge shaped with an absence of vascularity on Doppler. Whilst a hypo-echoic lesion may also signify a testicular tumor, the distinguishing feature is an increased blood flow on Doppler. In cases of uncertainty, an magnetic resonance imaging (MRI) scan can be useful.^[4]

The pathogenesis of segmental testicular infarct is not well known. Possible mechanisms include arteriolar embolus, venous rupture with venous thrombosis, and/or vessel inflammation.^[5] The testicle itself has a dual blood supply: from the testicular artery and the artery supplying the vas Deferens.^[6] In this case, the gonadal vessels are certain to be intact as they are more at risk of compromise during radical retroperitoneal surgery or during the high “Palamo” approach to varicocele repair. The suggested cause for partial testicular infarction in this case is the likely interruption of the arterial blood supply to the vas

which invariably occurs in a cysto-prostatectomy, although infection and/or the other mechanisms described above may have also contributed.

This case highlights a possible rare and overlooked complication during consenting for cysto-prostatectomy. Although, testicular tumors may present clinically and radiologically in a similar fashion, in this case, it was clearly justifiable not to perform an orchidectomy in view of the likely cause and normal tumor markers.

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