

Segmental Testicular Infarction: A Rare Finding of Acute Testis

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Abstract: Segmental testicular infarction is a rare entity in comparison to global testicular infarct which is a well - known surgical entity. It requires radiological confirmation as it is challenging to distinguish it from other causes of acute scrotal pain. Disabling testicular pain should not be ignored and patient deserves definitive treatment. Ultrasound is crucial diagnostic tool for this benign condition and to exclude the primary differential of testicular malignancy.

Keywords: Segmental testicular infarction

1. Introduction

Segmental testicular infarction is a rare occurrence compared to global testicular infarct, a well - known entity of surgical literature. It is difficult to distinguish it from other causes of acute scrotal pain and need radiological confirmation. Insufficient knowledge on pathophysiology and etiology is responsible for under documentation and rarity of this condition.

2. Case Presentation

A 40 - year - old Indian male presented to surgical OPD with acute left testicular pain since one day, continuous, throbbing in nature with radiation to inguinal region, pain relieved to certain extent with testicular elevation by scrotal support, with no known aggravating factors and with clinical picture of slightly swollen testis.



Figure 1



Figure 2

Radiology suggestive of mild free fluid in tunica vaginalis sac, patient was sent home with ofloxacin antibiotic course and analgesics, on one week follow up no relief in pain was found with sonographic findings suggestive of a geographical ill - defined, hypoechoic area involving anteromedial part of left testis of size 3.9×2.8×4.8 cm (AP×TRA×CC), with absence of blood flow on Doppler study, on the background of epididymitis and funiculitis of left testis.



Figure 3: Doppler of left testis suggestive of infarct involving anteromedial segment of left testis

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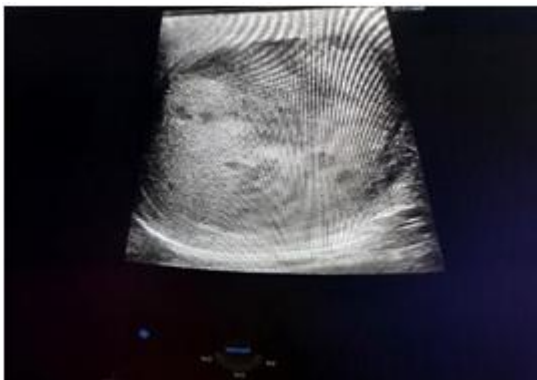


Figure 4: Ultrasound showing hypoechoic area



Figure 5: Testicular infarct on anteriomedial aspect of testis on cut section

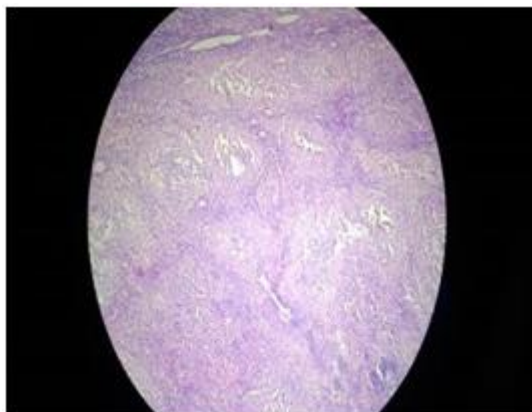


Figure 6: Histopathology showing necrotic seminiferous tubules

Patient is admitted to surgery department for further workup and management of pain by intravenous drugs. Upon further elicitation of history it was found that patient had history of left scrotal trauma 8 months ago by metal rod for which he took immediate surgical consultation having clinical and radiological investigations suggestive of left epididymo - orchitis with funiculitis for which he took antibiotic course with anti - inflammatory drugs for a period of 4 weeks and the pain resolved. Over period patient has had no history of fever, generalized weakness, weight loss or loss of appetite, difficulty while micturition or abdominal pain. Patient posted for left orchietomy with high ligation due to intractable pain and disruption of daily life (pain score 6/10) after informed written consent which revealed enlarged testis with blackening over anteromedial aspect, ill - defined in shape. Immediately post op, patients throbbing pain had

resolved.

3. Discussion

The incidence of segmental testicular infarction is extremely low compared to its counterpart of global testicular infarct, inference from previous studies suggests a clinical picture of acute testicular pain with differentials of intra testicular abscess due to severe epididymo - orchitis, testicular torsion and testicular malignancy. As a result of insufficient data available on segmental testicular infarct our primary source of information is previously documented cases. The most common cause is thought to be epididymo - orchitis, 1 this possibly is the cause in our case as well. Segmental testicular infarction is most frequently accompanied by acute scrotal pain and swelling.

Other possible etiologies suggested for this condition vasculitis, sickle cell disease, polycythemia, epididymitis, intimal fibroplasia of spermatic artery, hypersensitivity angiitis, trauma, or prior testicular torsion can predispose to this condition.² Testicular infarction post epididymo - orchitis could be result of inflammatory changes leading to lymphatic and venous outflow obstruction, thrombus formation due to bacterial toxins causing spermatic cord oedema and obstructing arterial flow leading to infarct either segmental or diffuse in nature.³ Often a radical approach is opted for a patient of acute testis having uncertain diagnosis, but management of testicular infarct based on available literature suggestive of conservative approach as management of choice, based on a retrospective study conducted in Belgium⁴ from October 1997 to June 2006 where 19 case records were taken into consideration of which only 3 underwent orchietomy and rest treated conservatively, patient kept in follow up showed resolution of symptoms as for in our case patient's complaint failed to resolve despite of persistent indoor patient and intravenous care, due to this unresolved pain with completion of fatherhood goals patient voluntarily opted for orchietomy in hopes of remittance of pain post operatively.

4. Conclusion

Testicular pain cannot be neglected specially when its disabling in nature, patient deserves definitive treatment, ultrasound is invaluable tool for diagnosis of this benign condition and rule out most important differential of testicular malignancy. Segmental testicular infarction does not warrant a surgical operative intervention and can be managed conservatively but in given scenario patient's willingness for the procedure and loss of daily wages due to pain supported the bold step s taken.

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Conflict of interest: None.

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