



TESTICULAR CALCULUS: A CASE REPORT

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ABSTRACT **Background:** Testicular calculus is an extremely rare entity with a less-known etiopathogenesis. To our knowledge, there have been only a handful of cases, likely less than 10. In this article we report one of the cases of testicular calculus. **Case Report:** A 72-year-old man presented with a history of painful testicular swelling. After a thorough diagnostic work-up to rule out possible neoplastic etiology, he underwent left orchidectomy and the sample was sent to our laboratory for histopathologic examination. It revealed a testicular calculus. **Discussion and Conclusion:** Solid testicular lesions in older adults are generally suggestive of infective etiology, trauma, and sometimes neoplastic etiology. Differential diagnosis should be done with caution. In patients with solid testicular mass with hyperechogenic appearance on scrotal ultrasonography, testicular calculus must be kept in mind in differential diagnosis. Further studies on this topic will help us better understand the etiology and treatment of this rare disease.

KEYWORDS : calcification, orchidectomy, ossification,

INTRODUCTION:

Testicular calculus is a very rare entity. To our knowledge, there have been only a handful of cases, likely less than 10.^{[1][2][3]} It also has a less understood etiopathogenesis.^[1]

Cases of calcification related to tuberculous etiology of the epididymis, calcification in an old hematoma or in the background of idiopathic granulomatous orchitis have been reported.^{[4][5]} However, a calculus developing in an otherwise normal testis is uncommon, with very few cases having been reported in literature.

CASE REPORT:

We present a case of a 70-year-old man who complained of pain in the left testis since the past 2 months. However, he had noticed an enlargement in his testicle which was stable and very slowly growing over many years. He did not give any history of trauma or tuberculous infection in the past. There was no other significant past history related to the urinary tract, such as urgency or increased frequency of urination, or infections.

Clinical examination:

On clinical examination, a 5 x 4 cm painful hard mass was noted in the left testis; right testis was normal for the age of the patient.

Routine Investigations:

Urine routine, microscopy and culture were done, which were all normal.

Tumour Markers:

LDH, b-HCG, AFP levels were done, which were all within normal limits.

Radiological Investigations:

Scrotal ultrasound revealed a 4.5 x 4.8 cm calcified hyperechogenic solid mass in the left testis. MRI was not performed owing to unaffordability of the patient.

Gross Examination:

We received an 8 x 5 x 3 cm specimen of left orchidectomy; the cord measured 4 cm. (Fig 1,2) External surface was congested and intact.

The cut section revealed a hard, calcified yellowish lesion. It measured around 4.5 x 4 x 2 cm; replacing most of the testis. There were no calcifications or calculi in the cord. The tissue was kept for decalcification for 24 hours and then processed.

Microscopic Examination:

Microscopy revealed large areas of ossified tissue, calcification, cholesterol clefts and thick-walled hyalinised vessels. Surrounding rim of testicular parenchyma showed changes of tubular atrophy. (Fig 3,4,5,6)

There was no intratubular germ cell neoplasia or malignancy/burnt out malignancy.

There were no areas of haemorrhage, changes of long-standing haemorrhage or dilated congested vessels. No granulomatous inflammation or features of tuberculosis were seen.

The diagnosis of testicular calculus was made based on microscopy and after ruling out other causes of calcification.

Stone Analysis:

Stone analysis revealed that the stone was composed of cholesterol.

DISCUSSION:

Calculus may be defined as a "a concretion formed in any part of the body, most commonly in the passages; often composed of salts of inorganic or organic acids, or other material such as cholesterol."^[1] Testicular calculus is a very rare diagnosis with a relatively unknown etiopathogenesis.^[1]

It can have a number of causes as enumerated below. (Table 1)

Table 1:

CAUSES OF TESTICULAR CALCIFICATION	
SR NO	CAUSE
1	Tuberculosis
2	Infective e.g. Abscess resolution
3	Hematoma
4	Trauma
5	Tumoral Calcification
6	Testicular Microlithiasis
7	Idiopathic Granulomatous Orchitis
8	Testicular Calculus

The three cases described in literature had similar gross and microscopic findings, as our case.[1][2][3]. In all of these cases, the patients belonged to a younger age group.

Sen et al^[1] and Dayanc et al^[2] reported that their patient had a painful testicular mass, similar to our case. Ellis and Hutton^[3] described in their case a painless testicular mass diagnosed on routine medical examination.

None of the cases had any predisposing factors, and are all believed to have been idiopathic in origin, similar to our case.

Radiological investigations of the scrotal sac, like ultrasound (USG) and Magnetic Resonance Imaging (MRI) of the scrotal sac is a very

useful investigation, and the findings noted on USG in all these three cases were comparable to ours.

Frozen section examination has proven to be a useful diagnostic tool, if neoplastic etiology is suspected, as testicular sparing surgery (TSS) could be a viable option.^{[6][7]}

However, in our case, on account of the patient being an elderly male, and the mass being central in location, orchidectomy was the preferred option.

CONCLUSION:

Testicular calculus, as we have discussed above, is rare and not very well studied as an entity. Through this article, we aim to shed light on this lesser-known entity, and thus help in understanding its aetiopathogenesis and behaviour, which remains unexplained to this day.

A point to be noted is that our stone was of pure cholesterol, which, to the best of our knowledge, may be one of the first cases reported in English literature.

FIGURES:

Gross Images:

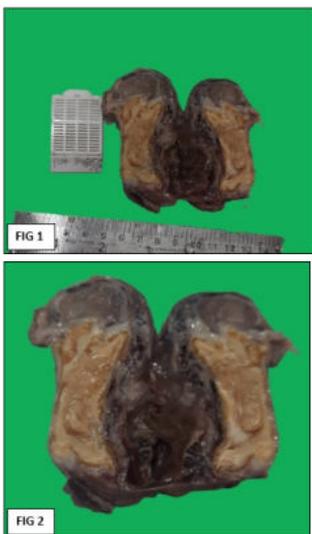


Fig 1 & 2 : Yellowish calculus replacing almost entire testis

MICROSCOPIC IMAGES:

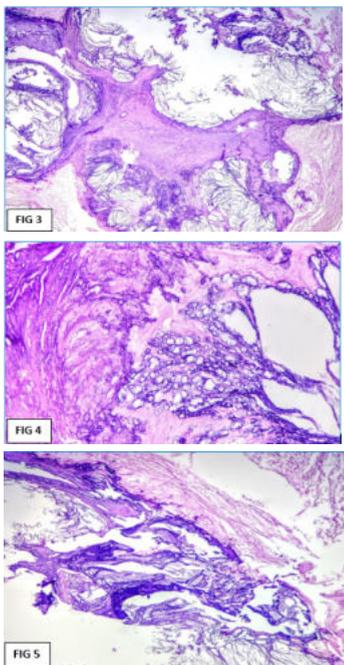


Fig 3,4,5 : Calculus with surrounding fibrous tissue

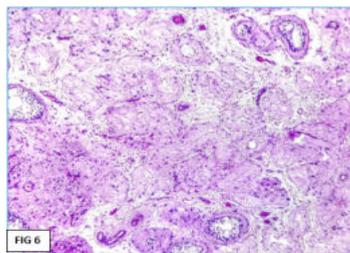


Fig 6: Testicular parenchyma with atrophic seminiferous tubules

TABLES:

Table 1: Causes of testicular calcification

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8	Testicular Calculus

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