



Testicular calculus: A rare case

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ABSTRACT

Background: Testicular calculus is an extremely rare case with unknown etiology and pathogenesis. To our knowledge, here we report the third case of testicular calculus. A 31-year-old man was admitted to our clinic with painful solid mass in left testis. After diagnostic work-up for a possible testicular tumour, he underwent inguinal orchiectomy and histopathologic examination showed a testicular calculus.

Case hypothesis: Solid testicular lesions in young adults generally correspond to testicular cancer. Differential diagnosis should be done carefully.

Future implications: In young adults with painful and solid testicular mass with hyperechogenic appearance on scrotal ultrasonography, testicular calculus must be kept in mind in differential diagnosis. Further reports on this topic may let us do more clear recommendations about the etiology and treatment of this rare disease.

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CASE REPORT

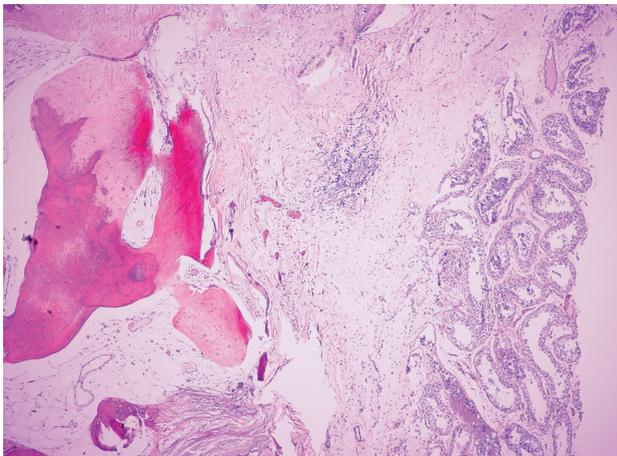
A 31-year-old man was admitted to our clinic with left testicular pain for a month. He did not report testicular trauma and/or tuberculosis in his past medical history and no accompanying urinary tract symptoms were present in his query. Scrotal examination showed a 2 cm painful and solid mass in left testis, whereas right testis was normal. Vital signs were in normal ranges and no other pathology was seen in systemic physical examination. Urinalysis and urine culture results were normal. Tumour markers were within normal limits (β -HCG: 1 mIU/mL, AFP:1.14 ng/mL, LDH:314 U/L). Scrotal doppler ultrasonography was performed and an eggshell shaped hypere-

chogenic 16x12 mm solid mass was determined in the middle of left testis. He underwent left radical inguinal orchiectomy with a suspicion of testicular cancer. He was discharged the day after the operation. In gross examination, the testis was unremarkable. On the cut section there was a well demarcated mass in white and yellow colour (Figure-1). Microscopically, this mass was composed of ossified tissue and there was minimal mononuclear inflammatory cells focally next to the ossification (Figure-2). Intratubular germ cell neoplasia or dysgenetic changes were not seen near or far away from the mass. These histopathological features revealed the diagnosis of testicular calculus. To rule out tuberculosis, three early morning urine samples and polymerase chain reaction assays for

Figure 1 - Macroscopic cut section appearance of testicular calculus.



Figure 2 - Histopathological documentation of testicular calculus.



mycobacterium tuberculosis were done for possible etiologic clarification, however results were negative. The patient is on follow-up for 42 months and did not face any other pathologic finding during this period.

CASE HYPOTHESIS AND RATIONALE

Testicular calculus is an extremely rare case with unknown etiology and pathogenesis. Testicular calcification/ossification may evolve due to tuberculosis, haematoma resorption or after trauma; however none of these conditions were present in our patient.

DISCUSSION AND FUTURE PERSPECTIVES

To our knowledge there were only two case reports for testicular calculus in the existing literature presenting with similar symptoms and age interval for testicular cancer (1, 2). Our case also mimics a testicular cancer considering the presenting symptoms and age, so work-up consisted of a testicular mass approach. Definition of the calculus is “a concretion formed in any part of the body, most commonly in the passages of the biliary and urinary tracts; usually composed of salts of inorganic or organic acids, or of other material such as cholesterol.” Localized bone formation in extraskeletal sites is a known disease and many of these are called as osteoma cutis but they are not true neoplasias. They are accepted to be products of metaplasia. There is only one case report of testicular osteoma (3), but we believe this case is not a true osteoma. The two cases described in English literature are similar cases to any etiological factors as in our case (1, 2). We believe all these three cases to have developed under metaplastic processes, and either calculus or stone terminology is appropriate according to the nature of the lesion. Testicular calcification/ossification may evolve due to tuberculosis, haematoma resorption, or after trauma. Tuberculosis tests were negative in our patient. No hemosiderin pigment was seen and no trauma history was present excluding the other possible etiologies. Ellis and Hutton (1) reported that their patient was diagnosed

on routine medical examination with no testicular pain or discomfort in his past medical history, whereas Dayanc et al. (2) described a 35-year-old man presenting with testicular painful mass. They also mentioned that this lesion was highly echogenic on scrotal ultrasonography. These two features are in close proximity with our patient. Scrotal magnetic resonance imaging (MRI) is a useful tool for differentiating between benign and malignant intratesticular masses, but high costs limit its use in daily clinical practice (4). Organ sparing surgery with frozen-section examination could be an option for this patient (5-7). However; central location of the mass, suspicion of a testicular tumour and healthy contralateral testis kept us from this option. We can conclude that in young adults with painful and solid testicular mass with hyperechogenic appearance on scrotal ultrasonography, testicular calculus may be kept in mind in differential diagnosis. Further imaging with MRI and testicular sparing surgery with the availability of frozen-section examination may be opted in proper cases. Further reports on this topic may let us do more clear recommendations about the etiology and treatment of this rare disease.

CONFLICT OF INTEREST

None declared.

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