

## Case Report

### Testicular Microlithiasis: Report of Two Cases and Overview

Abdel Rahman E. T. Babekir, Obaideen A. M, Ahmed Mohammed Adam

#### Abstract

Testicular microlithiasis is a rare asymptomatic disease of the testis. It is associated with testicular tumors and a wide variety of other pathologies. The sonographic image which is the main tool for diagnosis is characteristic. Because of its high association with malignant testicular tumors incidentally discovered cases of testicular microlithiasis should be followed up.

**Keywords:** varicocele, intratesticular, epididymorchitis.

#### PATIENT 1

A 22 years old male presented with bilateral testicular pain and a swelling above the left testis. Scrotal examination revealed a varicocele on the left side. Sonographic evaluation of his scrotum confirmed the left varicocele and showed bilateral, multiple, intratesticular, non-shadowing, echogenic foci scattered diffusely in the testicular parenchyma (Fig 1 a-b).

#### PATIENT 2

A 20 years old male presented with right epididymorchitis. Ultrasound examination of his scrotum showed findings similar to that seen in the first patient.

#### Discussion

Testicular microlithiasis (TM) is a rare, asymptomatic, non-progressive disease of the testicle. It is an imaging entity usually discovered incidentally. Its prevalence is generally reported to be 0.05- 0.6% but there are no proper studies to determine its prevalence in the healthy population.

1. Consultant general surgeon, King Abdul Aziz Armed Forces Hospital, Tabuk. P.O. Box 3225, Abha, Saudi Arabia. Tel 0502333713, Email: [dr\\_eltayeb@yahoo.com](mailto:dr_eltayeb@yahoo.com)

2. Senior Consultant Radiologist, King Abdul Aziz Armed Forces Hospital, Tabuk. PO Box 100, Tabuk, Saudi Arabia. Tel 0504552295, Email: [obaideen44@yahoo.com](mailto:obaideen44@yahoo.com)

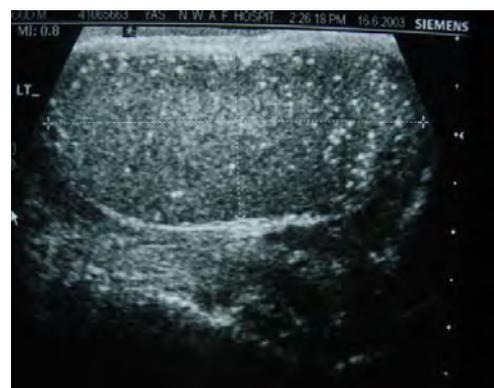
3. Consultant general surgeon, University of Medical Science & Technology – Khartoum- Sudan. Tel00249912217026 Email: [ahmedadam00@hotmail.com](mailto:ahmedadam00@hotmail.com)

Cast J.E et al reported a prevalence of 0.6% in a population referred for scrotal sonography<sup>1</sup> Peterson AC et al reported a prevalence of 5.6% in a selected population<sup>2</sup>.

Legend to Fig 1 (a&B)



a: Sonogram of the right testis



b: Sonogram of left testis, both showing multiple, intra- testicular, non-shadowing echogenic foci.

Incidence of 15% has been reported in infertile patients<sup>3</sup>. Histologically TM consists

of laminated eosinophilic calcifications, which are thought to be the result of accumulation of cellular debris and deposition of glycoproteins, located in the seminiferous tubules<sup>3</sup>. It occurs in adults as well as children, the youngest child we could find in literature was 4 years old<sup>4</sup>. It is usually bilateral but unilateral cases have been reported<sup>5</sup>. The sonographic image of TM is characteristic, it appears as multiple small, intratesticular, non-shadowing echogenic foci 1-3 mm in size, scattered diffusely throughout the testicular parenchyma giving rise to snowstorm appearance. Shadowing has been reported giving rise to a comet tail appearance<sup>6</sup>. Peripheral or segmental distribution and clustering of the echogenic foci are also known to happen<sup>3, 7</sup>. The number of echogenic foci needed to diagnose TM is generally put as five foci or more in a single ultrasound image, but some authors classify TM as classic if there are five or more foci in one ultrasound image and limited when there are less than five foci in one ultrasound image<sup>8</sup>. TM is strongly associated with seminomatous and non-seminomatous testicular germ cells tumors; however, seminoma is the tumor most commonly associated with it. The reported incidence of testicular malignancy in association with TM ranges from 35% to 42%<sup>7</sup>. There are few reports of patients developing testicular tumors while on follow up for TM<sup>9</sup>. Other conditions reported to be associated with TM include cryptorchidism, infertility, Klinefelter's syndrome, Down's syndrome, male pseudohermaphroditism, pulmonary alveolar microlithiasis, previous radiotherapy, testicular torsion, epididymorchitis, and

varicocele. Due to the strong association with testicular tumors, patients with TM discovered incidentally should be taught how to do self examination and should be followed up at least once a year with physical examination, sonography and tumor markers (Alpha fetoprotein and beta human chorionic gonadotropin).

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