Journal of Bangladesh College of Physicians and Surgeons
Vol. 34, No. 2, April 2016

Testicular Tuberculosis with Tuberculoma of Brain in an HIV Negative Patient

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Summary:

Isolated testicular tuberculosis without renal or pulmonary involvement has not been reported much earlier. The case of a young HIV negative patient with testicular tuberculosis and tuberculoma of brain has been presented. A 32 years old normotensive, non-diabetic farmer presented to emergency facility with sudden onset of severe headache, vertigo and vomiting that developed over 24 hours and mild pain, swelling of right hemiscrotum associated with low grade fever for last one month. On examination, patient was conscious, oriented, pulse rate was 72/min, blood pressure was recorded 130/80 mm Hg, body temperature was 99 degree F, genital examination revealed swelling of right hemiscrotum with enlarged, firm and mildly tender right testis. He refused full neurological examination due to severe headache and vertigo. MRI of brain revealed multiple, hyper-intense, ring-enhancing lesions over right cerebellar hemisphere and corpus callosum. Aspiration of scrotal fluid revealed about 50 ml of yellowish pus, microbiology confirmed presence of few acid-fast-bacilli and plenty of pus cells. FNAC from right testicular mass revealed presence of granuloma and caseation necrosis. His chest X-ray and CSF analysis were normal, ESR was 20, USG of abdomen, hepatic and renal work-up was normal. Soon the patient was started with category I antituberculosis drug along with intravenous steroids. An excellent symptomatic improvement developed on 5th day of initiating drug therapy, he was closely monitored and followed up after discharge. This case report was prepared with his full consent.

(J Bangladesh Coll Phys Surg 2016; 34: 112-114)

Introduction:

Tuberculosis is one of the major health problems in Bangladesh. Although genitourinary tuberculosis was the most common subtype of extra-pulmonary tuberculosis in the past, it has recently been reported to account for less than 0.5% of all patient with extra-pulmonary tuberculosis and 1.5% of pulmonary tuberculosis[1, 2]. 15% to 20% of extrapulmonary tuberculosis involves the CNS[3]. CNS involvement manifests as meningitis, cerebritis, tuberculous abscesses or tuberculomas. Intracranial tuberculomas are a rare complication of tuberculosis occurring through hematogenous spread from an extracranial source. Testicular tuberculosis with only intracranial spread is an even rarer finding and to the best of our knowledge, only one previous case has been reported in the literature[4].

Male genital TB can present as a testicular mass that is difficult to differentiate from malignancy. Again, misdiagnosis of scrotal TB may lead to otherwise avoidable epididymo-orchiectomy[4]. Clinical suspicion or recognition and prompt diagnosis are important because early treatment can prevent patient deterioration and lead to clinical improvement.

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Received: 22 January, 2015 **Accepted:** 10 January, 2016

Case Report:

A 32 years old normotensive, non-diabetic farmer presented to emergency department with the complaints of sudden onset of severe headache, vertigo and vomiting that developed over preceding 24 hours and rendered the patient unwilling to move. On close questioning, he mentioned about mild pain and swelling of right hemiscrotum associated with low grade fever for last one month. There was no history of cough, haemoptysis or abnormal urethral discharge. He was non-smoker, non-alcoholic and there was no history of substance abuse or high risk sexual behavior, he was happily married and had two children. On examination, patient was conscious, oriented, pulse rate was 72/min, blood pressure was recorded 130/80 mm Hg, body temperature was 99 degree F, genital examination revealed swelling of right hemiscrotum with enlarged, firm and mildly tender right testes. He refused full neurological examination due to severe headache and vertigo, however, there was no neck stiffness, reflexes and fundus were normal. MRI of brain revealed multiple, smallring-like lesions over right cerebellar hemisphere and corpus callosum (Fig. 1). USG of scrotum showed presence of fluid at right

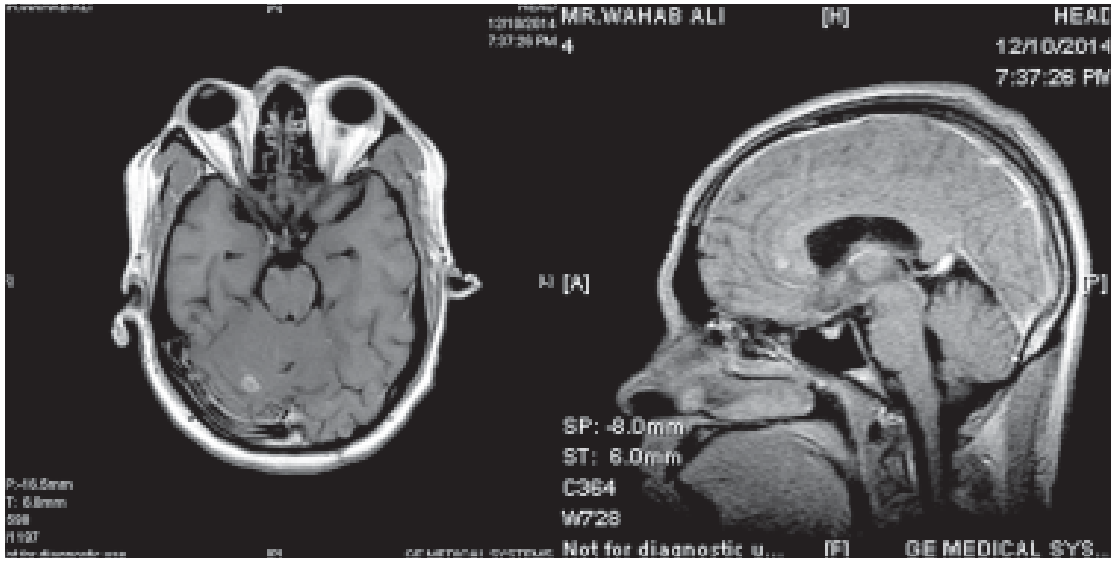

Fig.-1: *MRI of brain showing multiple, hyper-intense ring-enhancing lesions at right cerebellar hemisphere and genu of corpus callosum.*

hemiscrotum and multiple hypo-echoic lesions inside right testis (Fig. 2). Aspiration of scrotal fluid revealed about 50 ml of yellowish pus, microbiology confirmed presence of few acid-fast-bacilli and plenty of pus cells. FNAC from right testicular mass confirmed presence of granuloma and central caseation necrosis (Fig. 3). His chest X-ray was normal. CSF analysis revealed two lymphocytes/high power field with normal protein, sugar levels and ADA level 3 IU/L. ESR was 20, USG of abdomen, hepatic and renal work-up was normal, HIV status was negative. Serum levels of beta-HCG, AFP, LDH and PSA were normal. A diagnosis of testicular tuberculosis with tuberculoma of brain was made. Soon the patient was started with antituberculosis drug category I regimen according to national guideline for tuberculosis as well as intravenous steroids. An excellent symptomatic improvement developed on 5th day of initiating drug therapy, he was discharged on 9th day, when he was able to move independently. His follow-up visit was on 20th day of initiating drug, it was uneventful and revealed normal neurological findings with decreased size of testicular lump. Patient was re-assured and advised to continue anti-TB drug, the intravenous steroid was switched to oral to be

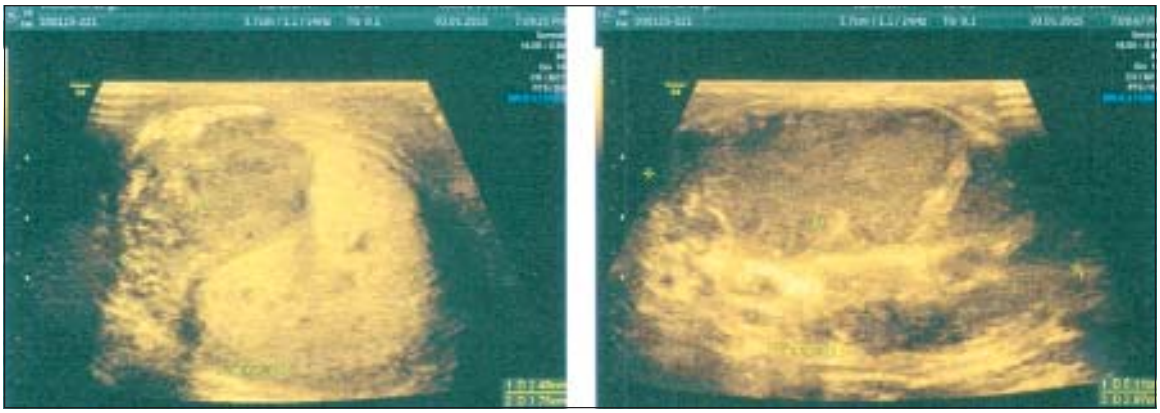

Fig.-2: *USG of right testis (Arrows indicate outline of hypo-echoic lesions).*

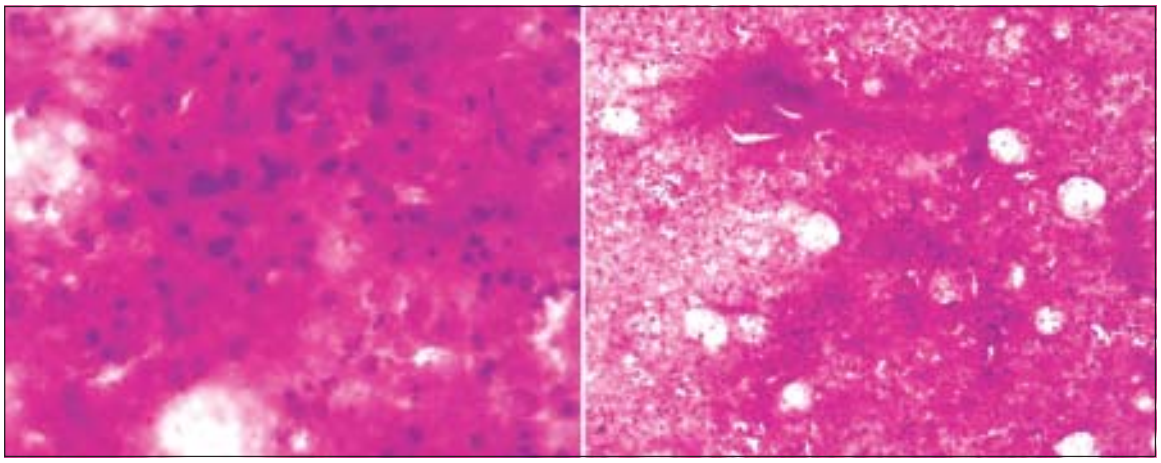

Fig.-3: *Slides of FNAC from right testis showing granuloma and caseation necrosis.*

continued as gradual tapered dose for next one month, a monthly follow-up schedule was offered.

Discussion:

To the best of our knowledge, there has been only one previously reported case of testicular tuberculosis with only intracranial spread, which was initially managed for testicular cancer and patient underwent radical orchidectomy, the diagnosis being made by histopathology of specimen. High index of clinical suspicion, multidisciplinary consultation and identification of tumor markers may guide diagnosis of testicular tuberculosis at initial stage as well as avoid over-diagnosis of cancers.

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