Case Report

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Seminal Vesiculitis due to *Mycobacterium gastri* Leading to Male Infertility

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Key Words

Seminal vesiculitis
Tuberculosis
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Abstract

Tuberculosis of the genitourinary tract is a well-known cause of male infertility. However, infertility from infection by nontuberculous mycobacterium has not been reported. Herein, we present a case of seminal vesiculitis due to *Mycobacterium gastri* in a diabetic patient leading to male infertility. Improvement in semen quality was noticed after 6 months of therapy with isoniazid, ethambutol and rifampicin.

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Case Report

MCG, a 31-year-old male patient presented at our Male Infertility Clinic for evaluation of primary infertility of 5 years duration. He had been a known diabetic on insulin for 8 years. He was treated for pulmonary tuberculosis (type of organism not known) with isoniazid, rifampicin and ethambutol 3 years ago. Physical examination was unremarkable except for right epididymitis. Apart from an ESR of 56 mm at the end of the 1st hour, routine biochemical and hematological investigations were normal. Semen analysis revealed a total sperm count of 26 millions/ml with over 90 % dead sperms

and the remaining with distorted morphology. Urine and serum cultures were negative for routine aerobic and anaerobic bacteria. The urine culture grew *Mycobacterium gastri* at the end of 5 weeks, while semen culture did not reveal any acid-fast bacilli. Ultrasonogram (US) of the kidneys was unremarkable; however, US of the seminal vesicles revealed marked dilatation on both sides. Excretory uro-gram showed normal urinary system. Testicular biopsy revealed normal spermatogenesis. Left vasoseminal vesiculography showed no obstruction, but the seminal vesicle was dilated and tortuous. US-guided aspiration of the right seminal vesicle was done and contrast injected. CT scan taken following this revealed a dilated semi-

Fig. 1. CT scan of the pelvis after 6 days of US-guided contrast injection into the right seminal vesicle which is dilated and tortuous (a). The left seminal vesicle is also dilated (b).

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1.5 ml

creamy white 180 mg % 18 millions, all of them dead 25–30/HPF 5–10/HPF

no organism seen absent

negative

present for 5 weeks

Table 1. Analysis of the seminal vesicle aspirate

Amount Color Fructose Microscopy

Total sperms

Pus cells

RBC Bacteriology

Gram stain

Acid-fast bacilli on smear

Culture for aerobic and anaerobic organisms

M. gastri on culture

nal vesicle (fig. 1). The rest of the urinary tract was normal in the CT scan. The seminal vesicle aspirate characters are detailed in table 1. The aspirate yielded *M. gastri* after culture for 5 weeks. The patient was started on isoniazid, rifampicin and ethambutol, and at 6 months follow-up, his seminogram revealed a total count of 56 millions/ml, 30% with normal morphology and viability.

Discussion

Nontuberculous mycobacterial infections of the genitourinary tract are infrequently seen [1, 2].

M. kansasii and *M. avium-intracellulare* have been attributed to renal infections [3–5]. *M. xenopi* and *M. farinosus*/z'-induced epididymitis have also been reported [6, 7]. Granuloma-tous prostatitis associated with isolation of *M. kansasii* was reported in a 31-year-old man from Omaha [8]. *M. gordonae*, *M. gastri*, *M. terrae-triviale* and *M. flavescens* are grouped under atypical mycobacteria of little or no pathogenicity for man [3]. Urinary smears are notoriously

unreliable for the diagnosis of genitourinary tuberculosis because of contamination from the lower end of the urethra. *M. smegmatis* is the traditional contaminant [3]. However, in the present case, *M. gastri* was grown both from the urine as well as the seminal vesicle aspirate; the latter excludes any contamination from the urethral or proximal urinary system. The fact that the patient had a radiologically demonstrable abnormality in the seminal vesicles with normal urinary tract further supports the contention that the *M. gastri* isolated from urine and seminal vesicle aspirate was responsible for the disease leading to infertility.

The majority of the experience in the management of nontuberculous mycobacterial diseases has come from the treatment of respiratory diseases, which constitute over 90% of the reported nontuberculous mycobacterioses [9]. No definite answers are available to several questions relating to the group of patients to be treated, the drugs to be used and the duration of treatment [3]. Hence, the risk-benefit ratio of drug therapy must be considered carefully and each case needs a meticulous, individualized approach.

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