

Microfilariae of *Wuchereria bancrofti* in Testicular Aspirate

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ABSTRACT

Present study deals with results of fine needle aspiration of both the testes in a patient with azoospermia. Surprisingly, aspiration of right testis revealed large number of microfilariae in the smears. Conversely, left testicular aspirate showed few spermatogonia. However, microfilariae were not detected in venous blood smears. Findings of this study suggested possible role of *Wuchereria bancrofti* in causation of azoospermia.

Keywords: Aspiration biopsy, Azoospermia, Filariasis

CASE REPORT

Present report relates to the results of Fine Needle Aspiration (FNA) of right testis in a patient with azoospermia. A patient, aged 25 years, was married for the last five years. Couple was suffering from primary infertility. Semen analysis showed grayish white turbid fluid. Its volume was ~5 ml. Microscopic examination did not show spermatozoa. Repeated semen examinations revealed azoospermia. Bilateral testicular FNA of spermatic cords were done under local lignocaine anaesthesia. About 0.5 ml of clear transparent fluid was aspirated from right testis. Smears were fixed in ethyl alcohol and stained using conventional Haematoxylin&Eosin (H&E) technique. Later, smears were microscopically examined.

To our surprise, large number of microfilariae of *Wuchereria bancrofti* (~ 450 larvae in 0.5 ml of aspirate) was seen [Table/Fig-1a-d]. Differential leucocyte count of these smears revealed neutrophils- 24%, lymphocytes-70%, monocytes-05% and eosinophils-01%. We interpreted blockage of right vas deferens by dilated lymphatics, fibrous tissue and newly formed lymphatics. Aspirate from left testis did not show microfilaria. Left testicular aspirate was haemorrhagic and it contained few spermatogonia alone. Moreover, microfilariae were not detected in venous blood smears. The patient was diagnosed as a case of chronic filarial orchitis. This patient did not have any testicular swelling. No other positive finding was detected in this patient. He was treated with diethylcarbamazine 100 mg for six weeks and doxycyclin 200 mg for seven days. This patient could not be followed further.

DISCUSSION

A few cases have been reported earlier where microfilariae were aspirated in testicular aspirate [1]. In the current case, microfilariae

were aspirated in right testicular aspirate without having microfilariae in left testicular aspirate and in venous blood smears. However, filariasis has been reported earlier without microfilariaemia [2]. Elevated levels of IgE are known to develop following exposure to filarial infection [3]. Small amounts of IgE antibody may persist for many years [3]. Specific IgE antibody may have a role in clearance of microfilariae from circulation. *Wuchereria bancrofti* also carry *Wolbachia* endosymbionts which may help the parasite to survive [4]. It appears that lymphangiectasia (dilated lymphatics) develops due to adult worms of *Wuchereria* and their products while fibrosis develops following immune inflammation [5].

CONCLUSION

Thus, in the present case of a patient with azoospermia the smear examination showed large number of microfilariae of *W. bancrofti*, suggesting possible role of lymphatic dilatation and fibrosis in chronic filarial orchitis. Further, elimination of *Wolbachia* following doxycyclin treatment results in improvement in filarial lymphedema. Recovery from oedema occurs subsequent to formation of new lymphatics.

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[Table/Fig-1]: a) Shows microfilaria, spermatozoa and few inflammatory cells (H&E-20X). b) Shows a microfilaria and few inflammatory cells (H&E-40X). The curves of microfilaria were round with broad cephalic end. c) Larvae had double row of nuclei (H&E-100X). d) Nuclei did not extend upto the tip of tail end of parasite, suggesting a diagnosis of *Wuchereria bancrofti* (H&E-40X).

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