

CASE REPORT OF MICROFILARIA IN CERVICAL PAP SMEAR: A COMMON PARASITE IN AN UNUSUAL SITE

Kanchan Garg¹, Hema Pant², Shashi Bala Arya^{2*}

Publication Info

Paper Submission Date
10th November 2016

Paper Acceptance Date
15th December 2016

Paper Publication Date
December 2016

DOI
10.21761/jms.v1i2.7129

Abstract

Introduciton: Filariasis is a common public health problem in Asian countries. Filariae have also been known to be present in any possible site, possibly because of their ability to migrate along the lymphatics. This paper reports the finding of microfilariae in cervical pap smear.

Case Report: A 33-year-old woman presented to Obstetrics and Gynaecology Department with chief complaints of pain lower abdomen for 15 days. Per speculum and Per vaginal examination revealed no clinical abnormal finding. The smears revealed sheathed microfilariae with its smooth graceful curves and well stained nuclei not extending up to the tip of the tail. It was thus a case of isolated cervico-vaginal presentation. The patient was put on anti filarial therapy.

Conclusion: This case highlights the value of proper and careful screening of the cytological smears in the detection of asymptomatic and clinically unsuspected cases of Bancrofti Filariasis.

Keywords: Microfilaria, Cervical Pap smear

INTRODUCTION

Filariasis in India is caused by two closely related nematode worms - *W. bancrofti* and *B. malayi*.¹ Microfilariae have been demonstrated in cytological preparations made from various sites including cervico-vaginal smears, pericardial fluid, hydrocele fluid, nipple secretions, bone marrow smears and fine needle aspiration cytological smears from various sites including breast, thyroid, lymph node, salivary gland, liver and epididymis.²⁻⁸ This paper reports the finding of microfilaria of *Wuchereria bancrofti* species in a 33-year-old female in cervical pap smear.

CASE HISTORY

A 33-year-old woman presented to Obstetrics and Gynaecology Department with chief complaints of pain lower abdomen for 15 days. Her vital parameters and systemic examinations were normal but differential leucocyte count showed moderate eosinophilia. Per speculum and Per vaginal examination revealed no clinical abnormal finding. Cervico-vaginal smears were wet fixed in 95% ethyl alcohol and stained with Papanicolou stain. The smears revealed sheathed microfilariae with its smooth graceful curves and well stained nuclei not extending up to the tip of the tail. (Fig.-1)

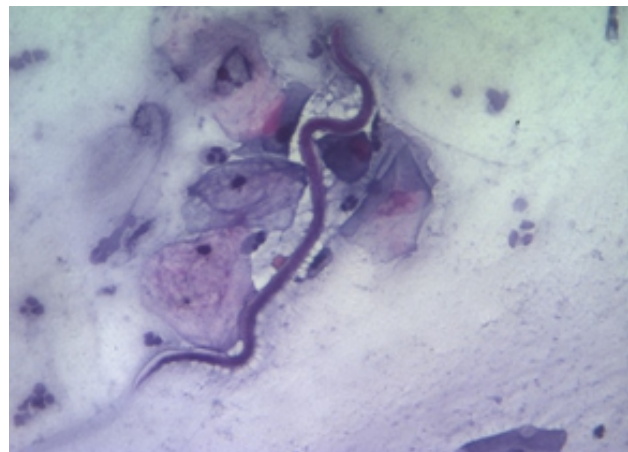


Fig-1: Microfilariae of *Wuchereria bancrofti* in cervical Pap smear. [x400]

The peripheral smears did not show any filaremia. Neither did the patient have any swelling of the limbs or lymphadenopathy. It was thus a case of isolated cervico-vaginal presentation. The patient was put on anti filarial therapy. The patient was given an appointment for follow-up six weeks following the pap smear.

DISCUSSION

Microfilaria is a nematode belonging to the family Onchocercidae and is found in the blood and skin.

Junior Resident¹, Professor²
Department of Pathology, *Department of Obstetrics and Gynaecology, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh,
Corresponding Email: panthema18@gmail.com

Lymphatic Filariasis is a major health problem in tropical and subtropical countries in Asia and the Pacific Island. Currently, more than 1.4 billion people in 73 countries are at risk and about 25 million men are afflicted with genital disease.⁹ Eight filarial species infect the human but serious infestation is caused by only four, i.e. *Wuchereria bancrofti*, *Brugia malayi*, *Onchocerca volvulus* and *Loa loa*.^{10,11} *Wuchereria bancrofti* is the most common causative organism, accounting for about 95% of all filarial infections. It was first reported in 1876 by Bancroft in Brisbane and the term filarial bancrofti was given in 1977. The life cycle is completed in two hosts. Man, is the definitive host and the female *Culex* mosquito, the most important (>50%) vector of *Wuchereria bancrofti*, acts as an intermediate host.¹²

The diagnosis of microfilaria is conventionally made by demonstration of microfilaria in the peripheral blood smear. It causes a spectrum of disease including lymphangitis, lymphadenitis, hydrocele, chyluria and elephantiasis. In occult filariasis, adult microfilarias are not present in the blood but are seen in the affected tissue. The diagnosis in asymptomatic and occult filariasis is therefore difficult by blood examination. Incidental detection of microfilaria in a routine cervical pap smear in absence of microfilaremia is being reported for its rarity. The paucity of such cases merits its presentation.

CONCLUSION

This case highlights the value of proper and careful screening of the cytological smears in the detection of asymptomatic and clinically unsuspected cases of Bancrofti Filariasis. Absence of microfilariae in peripheral smear does not exclude filarial infection. A high index of suspicion should be kept in mind while screening materials from any site of the body for early diagnosis and management.

REFERENCES

1. Park K. Park's Textbook of Preventive and Social Medicine. 18th ed. Jabalpur; pp. 211-6.

2. Varghese R, Raghuveer CV, Pai MR, Bansal R. Microfilariae in cytologic smears: a report of six cases. *ActaCytol.* 1996; 40:299-301.
3. Vassilakos P, Cox JN. Filariasis diagnosed by cytological examination of hydrocele fluid. *ActaCytol.* 1974; 18:62-4.
4. Mehrotra R, Singh M, Javed K, Gupta RK. Cytodiagnosis of microfilaria of the breast from a needle aspirate. *ActaCytol.* 1999; 43: 517-8.
5. Sodhani P, Nayar M. Microfilariae in a thyroid aspirate smears: an incidental finding. *ActaCytol.* 1989; 33: 942-3.
6. Dey P, Radhika S, Jain A. Microfilariae of *Wuchereria bancrofti* in a lymph node aspirate. A case report. *ActaCytol.* 1993; 37: 745-6.
7. Jayaram G. Microfilariae in fine needle aspirates form epididymal lesions. *ActaCytol.* 1987; 31: 59-62.
8. Agarwal R, Khanna D, Barthwal SP. Microfilariae in a cytologic smear from cavernous haemangioma of the liver. *ActaCytol.* 1998; 42:781-2.
9. Rohini CS, Jayaprakash HT. Microfilaria, a common parasite in an unusual site: a case report with literature review. *JCDR.* 2016; 10(4):8-9.
10. Nutman TB, Weller PF. Filarial and Related Infections. In: Kasper DL, Brunwald E, Fauci AS, Hauser SL, Longo DL, Jameson JL, (Eds). *Harrison's Principles of Internal Medicine*, 16th edn. New York: Mc Graw Hill, 2005. 1260-1266
11. Gupta S, Sodhani P, Jain S, Kumar N. Microfilaria in association with neoplastic lesions: Report of five cases. *Cytopathology* 2001, 12:120-126
12. Arora DR, Arora B. *Medical Parasitology*. 2nd ed. Delhi: SDR; 2005. pp:185