

Original Research Article

CONCOMITANT MICROFILARIA & MALARIA INFECTION IN TERTIARY CARE CENTRE

ABSTRACT

Microfilaria & Malaria are parasites that infect humans through common mosquito vectors which can be detected by examination of peripheral blood smear. Many times the finding of microfilaria is incidental but its early diagnosis helps in preventing the prognosis of the disease. Here we have reported few interesting cases of coinfection of Malaria and Filariasis in our center. This study provides information regarding management of patients with concomitant malaria and filariasis

Keywords: Malaria, Filariasis, concomitant infection

INTRODUCTION

Microfilaria is the larval stage of certain parasitic nematodes circulating in the blood of Humans, whose development occurs in the body of the insects. Malaria is a mosquito-borne infectious disease affecting humans and other animals caused by parasitic protozoans belonging to the Plasmodium type. Malaria and Filariasis are the two major mosquito borne public health diseases in India transmitted by the vectors Anopheles and Culex Mosquitoes. Symptoms of Filariasis usually do not manifest until adolescence or adulthood, when the parasitic burden is usually the highest.

Case presentation

Case 1

A 28-year-old male with no Premorbidities, was admitted with fever chills and vomiting from past one day. Examination showed mild Splenomegaly and mildly enlarged inguinal lymph nodes. Hematology Reports revealed that his Platelet count of 29000/ μ l was Low with 50% Neutrophil Left Shift (+). Biochemistry report revealed Hyperbilirubinemia with total bilirubin 2.7mg/dl & bilirubin 1.2mg/dl. Lab reports revealed 4+ ring forms *Plasmodium falciparum* & *Microfilaria* by QBC in blood using fluorescence microscopy. He was treated with IV Artesunate & Doxycycline. Repeat Malarial Parasite-QBC was found to be negative. He was treated with Primaquine stat dose. As his blood reports showed the presence of Microfilaria he was treated with DEC. [\(full word not abbreviation\)](#) He was discharged with the advice of tablet T. Banocide.

Case 2

A 30-year-old male patient was presented with the complaints of moderate & continuous fever from 4 days accompanied with rigor & chills with history of body pain, burning micturition, headache & giddiness, Vomiting. There were Rashes over trunk & Arms. Hematology Reports revealed that his Platelet count of 89000/ μ l was Low with 74% Neutrophil mild Left Shift (+). QBC report showed the presence of 4+ schizonts of *Plasmodium vivax* by Microscopy & Microfilaria was seen in the wet mount of blood. He was treated with the advice of Tablets T. DEC, T. Doxycycline, T. Risothen, T. Malarid after Chloroquine therapy.

Case 3

A 31-year-old Male who was a known Alcoholic came with complaints of Jaundice since 15 days and 1 seizure episode. He complained of yellow discoloration of eyes since 15 days, vomiting episodes, 1 Episode of GTCS Examination showed patient to be in Post-Ictal Phase with bilateral plantar extensor. CT was done showed a ring enhancing lesion raised a query of Tuberculoma. Hematology Reports revealed that his platelet count of 606000/ μ l was high with 50.1% neutrophil mild left shift (+) & 36.2% lymphocytes with the presence of atypical & reactive forms. Biochemistry report revealed Hyperbilirubinemia with total bilirubin 2.2mg/dl & bilirubin 1.2mg/dl. Lab reports revealed 2+ ring forms schizonts of *Plasmodium vivax* by QBC in blood using Fluorescence Microscope & Microfilaria was seen in the wet mount of blood. He was started on ATT & falcigo. Anti ICT measures were taken & was started on Antiepileptic. Patient Improved & without further intervention as per patients wish discharged with the advice of tablets T. Rezartin Forte, T. Eptoin, T. Pantadoc, T. Primaquine & DEC.

DISCUSSION

Malaria and filariasis are endemic in South Asia and represents major public health problem. Concurrent infection of dengue with malaria and malaria with filarial & some cases of malaria, filarial & Dengue have been reported in past[4]. In the present cases, patients harboring both parasites *Plasmodium* and *W.bancrofti* had no clinical symptoms of filariasis[1], as seen in our cases too, where the patients presented with either no symptoms or mild symptoms and signs of inguinal lymphadenopathy and these cases were found on routine screening of Peripheral blood smear. In one study, conducted in Orissa, Filariasis was less prevalent in lower age-groups. Malaria incidence in people below thirty years was higher compared to older people, on the contrary, microfilariae incidence was more in people above 15 years or more age. In our case series, all our patients were above 15 years of age[2].The co infection of malarial and filarial infection raised an important issue relating to the early diagnosis of filariasis, as the symptom of filariasis do not rapidly appear within 7-8 days after infection, as is the case in malaria, and would not normally be diagnosis prior to an onset of symptoms[3].

CONCLUSION

Concomitant malarial and filarial infections should not be overlooked in patients from endemic areas, including the Indian subcontinent. Microfilariae is mostly an incidental finding in the absence of the clinical features of Filariasis. In the endemic areas, all the blood smear for malarial finding must be screened for microfilariae as well to detect any asymptomatic carriers as both parasites affect the same human host and share common mosquito vectors^[5].

REFERENCES

1. Sujatha R, Pal N. Concomitant of Malaria and Filariasis in Peripheral Blood Smear Incidentally, Rama Univ. J. Med Sci 2015;1(1):52-53
2. Ghosh SK, Yadav RS. Naturally acquired concomitant infections of bancroftian filariasis and human plasmodia in Orissa, Indian J Malariol. 1995 Mar;32(1):32-6.
3. Dave D. Chadee, Samuel C. Rawlins and T. S. B. Tiwari. Short communication: Concomitant malaria and filariasis infections in Georgetown, Guyana. Tropical Medicine and International Health, Volume 8 no 2 pp 140–143 february 2003
4. VK Satyawali, Shanti Pandey, Vinita Rawat, and Mohm Khalil. Triple Co-infection of Malaria, Filaria, and Dengue: A Rare Entity. Journal of Laboratory Physicians, 2014 Jul-Dec; 6(2): 136–137.
5. Arwa Z. Al-Riyami and Murtadha Al-Khabori. Concomitant microfilaria and malaria infection, Blood Journal, 2013 121:4437.