

# Linezolid In Filariasis

Kalluzhathil Koshy Mathew<sup>a</sup>

a. Senior Consultant Physician\*

## ABSTRACT

Published on 21<sup>st</sup> October 2024

Two cases of filariasis responding well to the drug Linezolid are presented.

**Keywords:** Adenolymphangitis, Diethylcarbamazine, Linezolid, Ivermectin

\*See End Note for complete author details

## INTRODUCTION

*Wuchereria bancrofti* is the common filarial parasite that infects humans in this part of the world. The thread-like adult parasites reside in lymphatic channels or lymph nodes. Adult worms can cause lymphatic dilatation and thickening of the vessel walls. Lymphoedema and chronic stasis changes occur as complications. These are due to the direct effect of worms and the inflammatory effect of the host on the parasite.<sup>1,3</sup> The inflammatory responses are believed to cause enhanced granulomatous reactions and fibrosis. Lymphatic obstruction results. Acute adenolymphangitis and chronic lymphatic disease are the two varieties of the disease.<sup>2,4</sup> Acute adenolymphangitis is characterized by high fever, lymphatic inflammation, and transient oedema. Linezolid is a synthetic Oxazolidinone antimicrobial drug, and it is indicated for gram-positive infections.

## CASE HISTORY

### Case 1

A 27-year-old lady presented with swelling of the distal part of her left leg for the past one week. She was a known case of filariasis and had an episode of pain and swelling in the left foot before, and that has subsided with a course of tablet Diethylcarbamazine.

Clinical examination showed swelling in the left foot mainly confined to the ankle and the lower end of the leg. There was little redness and mild tenderness.

A peripheral night blood smear and the tests for detection of antibodies were not done because she was a known case of filariasis. Doppler test was not done. Blood results of the tests done before treatment showed Hb 14 gm/dL, WBC count-TLC 6200/cmm, DLC-P 64%, L 32%, E 4%, ESR 6 mm/hr, Random Blood sugar 122 mg/dL, Serum creatinine 0.8 mg/dL. There were no significant changes in the blood results of the tests done after treatment.

### Case 2

A senior citizen aged 78 presented with body aches, feverishness, and mild chills for the past 2 weeks. He has been a known case of filariasis for the past 5 decades. He used to get chills and body aches frequently since the onset of the filarial infection, and every time these symptoms subsided with the drug Diethylcarbamazine. This time the symptoms do not subside with Diethylcarbamazine and with the drugs Albendazole and Ivermectin.

Clinical examination showed that he was febrile, and he had no swelling or tenderness in the legs. Routine blood examination did not show any leukocytosis or

Cite this article as: Mathew KK. Linezolid In Filariasis. Kerala Medical Journal. 2024 Oct 21;17(3):173-4.  
| DOI: <https://doi.org/10.52314/kmj.2024.v17i3.668>

### Corresponding Author:

Dr. K.K. Mathew, MD, Senior Consultant Physician, Pratheeksha, Kayamkulam 690502,  
Email [drkkmathew@gmail.com](mailto:drkkmathew@gmail.com) Tel: 04792445975 Mob: 9188791588

eosinophilia. The Widal test was normal. The blood culture did not grow any microorganisms. Peripheral night blood smear and indirect fluorescence test and Elisa test for detection of antibodies were not done because he was a known case of filariasis. A Doppler test was not done. Blood results of the tests done before treatment showed 13.2 gm/dL, WBC TLC 5800/ cmm, DLC P 58%, L40%, E 2%; ESR 14mm/hr, Random Blood sugar 134 mg/dL, Serum creatinine 1mg/ dL. There were no significant changes in the blood results of the tests done after treatment.

## TREATMENT

These two patients were given Tablet Linezolid 600 mg twice daily for 7 days. Both of them had a dramatic recovery. All the symptoms, including the oedema, subsided completely after 7 days of treatment. None of them showed any side effects of the drug.

## Follow up

Close observation for 6 months did not show any abnormality. They are perfectly alright.

## DISCUSSION

Both patients were known cases of filariasis, and hence tests were not done to find microfilaria in the peripheral night blood or to detect antibodies. In the second case, bacterial infection was ruled out by the blood tests. The second case was a case of chronic filariasis. Because he was taking regularly Diethylcarbamazine, he did not develop oedema, and when it was developed, it was suppressed by medication. Diethylcarbamazine 2 mg/kg orally 3 times daily for 12 days or as a single dose, killed the adult worms. The repeated occurrence of fever was due to the direct effect of worms and the

inflammatory effect of the host on the parasite. He has come to a stage where he became resistant to the drugs Diethylcarbamazine and the combination of the drugs Albendazole and Ivermectin. Linezolid is basically effective in skin and skin structure infections. It is thought that the drug acts on the lymphatic channels and the adult worms. This study is the first to show that Linezolid is effective in the treatment of filariasis. Further studies on the effect of Linezolid in filariasis are recommended with a large number of patients.

## CONCLUSION

The drug Linezolid is found effective in filariasis, especially in resistant types of filariasis.

## END NOTE

### Author Information

Dr. K.K. Mathew, MD, Senior Consultant Physician, Pratheeksha, Kayamkulam 690502

**Conflict of Interest:** None declared

## REFERENCES

1. Addiss DG, Dreyer G. Treatment of Lymphatic Filariasis. In: Lymphatic Filariasis [Internet]. Published by Imperial College Press and Distributed by World Scientific Publishing Co.; 2000 [cited 2024 Oct 5]. p. 151–99. (Tropical Medicine: Science and Practice; vol. Volume 1).
2. Drewer G et al. Acute attacks in the extremities of persons living in an area endemic for bancroftian filariasis: Differentiation of two syndromes. *Trans R Soc Trop Med Hyg* 1999; 93: 413
3. McCARTHY JS Diagnosis of lymphatic filarial infection, in lymphatic filariasis. TB Nutman (ed). London, Imperial college press 1999; 127-149
4. Bockarie MJ, Tisch DJ, Kastens W, Alexander NDE, Dimber Z, Bockarie F, et al. Mass treatment to eliminate filariasis in Papua New Guinea. *N Engl J Med*. 2002 Dec 5;347(23):1841–8.