Pictorial CME

Elephantiasis : A Reappraisal with Special Reference to Nuclear Scan

Rudrajit Paul[1]

Elephantiasis, or lymphatic filariasis, is a neglected tropical disease in India[1]. It is a vector borne disease with the parasite lingering in the lymphatic system for decades (if untreated) and causing an irreversible disfiguring and debilitating damage to the limbs and other organs[1]. Although elephantiasis is most commonly caused by chronic infection with *Wuchereria* or *Brugia* species, there are rare some non-infectious causes also, like podoconiosis, caused by chronic exposure to irritants in the soil[2]. Very rarely, congenital absence of lymphatics can cause a similar appearance or lymphatic obstruction in lepromatous leprosy can cause a condition called Elephantiasis nostras verrucosa[3]. Whatever the aetiology, elephantiasis has become extremely rare in India presently, due to a spectacular socio-economic development, mass anti-filarial drug prophylaxis programs and a general improvement in medical services. However, medical students need to be aware of the clinical picture because occasionally such cases may be encountered. This article presents the pictorial presentation of such a rare case.

Case Report

A 68-year-old woman from Kolkata came to the OPD with massive swelling of both legs (left>right). There were non-healing ulcers on the lower legs (Fig 1) with foul smelling discharge and pus. She could not bend the knees. The skin had a leathery feel with peau d' orange. The patient had never visited a proper medical facility in the last three decades and had only been attended by alternative medicine practitioners. In childhood, she had stayed in lower Assam for a few years after which the family moved to Kolkata.

Routine blood works were normal including a normal eosinophil count. Ultrasonographic venous doppler did not show any venous thrombosis. There was massive interstitial edema. Radioisotope lymphangioscintigraphy (Fig 2) showed almost complete absence of dye flow from distal to proximal limb. Blood for IgG anti-Filaria antibody came positive.

The patient was treated for cellulitis and pyoderma and discharged with explanation of the prognosis. Surgical colleagues found the case inoperable.

Discussion

Elephantiasis is a chronic debilitating condition with profound implications for social status, mobility and professional capability of the patient. It is chronic massive irreversible lymphedema. Besides the apparent cosmetic effect, the most common complication of chronic lymphedema is recurrent skin and soft tissue infections, which was present in our patient. Such infections are not only the effect of lymphedema but also a contributor to further progression of the lymphatic blockage[4]. Our patient had suffered from recurrent pyoderma and cellulitis over decades.

Fig 1 — lower leg of the patient with cellulitis and pus

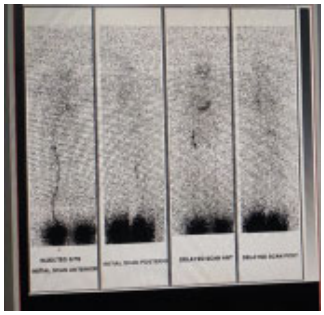

Fig 2 — Lymphangio-scintigraphy of both legs showing absence of dye flow

Medical treatment in the initial stages of filariasis with Diethyl Carbamazine Citrate can help in clearing the infection. But once the infection becomes chronic with lymphatic fibrosis, anti-parasite treatment is generally unhelpful. There are some surgical options for lymphedema like debulking of skin, lympho-venous anastomosis creation or laser treatment[4]. But again, those are useful in initial stages only, not the advanced stage seen here. There are certified lymphedema therapists available, who can help the patient with appropriate advice about exercise, hygiene, footwear, wound care and complex decongestive physiotherapy[5].

There are specific geographical regions endemic for filariasis. But, as the present case shows, such severe cases may be encountered in non-endemic regions too. In those cases, it is important not only to take present address, but also a detailed history of dwellings from childhood.

We present this case to highlight the clinical presentation of this rare condition. Since the infection has become very rare in India, physicians may miss the diagnosis initially. But a missed diagnosis can result in future devastating consequences.

[1]MD, MRCP, DNB, Consultant Physician, Department of Medicine, Ruby General Hospital, Kolkata, West Bengal 700107 and Corresponding Author

Received on : 17/04/2024
Accepted on : 30/06/2024

References

1 Anon. Lymphatic filariasis. World Health Organization. Geneva. [Published 2023 Jun 1; Cited 2024 Feb 4]. Available online from https://www.who.int/news-room/fact-sheets/detail/lymphatic-filariasis#:~:text=Lymphatic%20filariasis%2C%20commonly%20known%20as,damage%20to%20the%20lymphatic%20system.
2 Mousley E, Deribe K, Tamiru A, Davey G — The impact of podoconiosis on quality of life in northern Ethiopia. *Health and Quality of Life Outcomes* 2013; **11:** 122.
3 Basbug HS, Bitargil M, Ozisik K — Approach to elephantiasis nostras of unclear etiology: a case report with brief review. *App Med Res* 2015; **1:** 118-21.
4 Newman TE, Juergens AL — Filariasis. StatPearls [Internet]. Available online from https://www.ncbi.nlm.nih.gov/books/NBK556012/
5 CDC — Care of Patients with Lymphedema, Elephantiasis, or Hydrocele. [Online]. [Cited 2024 Feb 3]. Available online from https://www.cdc.gov/parasites/lymphaticfilariasis/health_professionals/care.html