Periocular Filarial Lymphoedema

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Introduction

Nine filarial species infect man but the lymphatic dwellers *Wuchereria bancrofti*, *Brugia malayi* and the subcutaneous *Onchocerca volvulus* are responsible for most infections worldwide. The species most commonly involved in lymphatic filariasis are *W. bancrofti*, *B. malayi* and *B. timori* of which bancroftian filariasis is the most frequent. *B. malayi* is mostly confined to South-East Asia [1]. *B. timori* is restricted to Indonesian islands [2].

The common manifestations of lymphatic filariasis include asymptomatic microfilaraemia, early filariasis (filarial fever, lymphadenitis, lymphangitis, funiculitis, epididymitis, filarial orchitis and filarial abscess), chronic obstructive filariasis (lymph node enlargement, thickened lymphatic channels, hydrocele, chyluria, chylocele, chylous ascitis, chylous diarrhoea, elephantiasis and lymphoedema) and occult filariasis (tropical pulmonary eosinophilia, filarial arthritis, diffuse mesangial proliferative glomerulonephritis, pericardial and endomyocardial fibrosis, raised intracranial pressure with nerve palsies and allergic response to helminths leading to vesiculobullous lesions and urticaria). Though involvement of the eye in lymphatic filariasis has been reported, it is rare.

We report a rare case of filarial lymphoedema involving the periocular tissues.

Case Report

A 24 year old male, resident of Maharashtra, was referred with history of fever since nine months and swelling around the left eye for six months. Fever was recurrent, with 5 episodes lasting for 2-3 weeks each. The swelling around the left eye was of insidious onset with episodes of swelling of glands in front of the ipsilateral ear associated with reddish streaks from the glands proceeding towards the skin around the left eye in a retrograde fashion. These episodes were associated with fever.

There was no history of drug intake, pain or itching over

the lesions, scaling, oozing or vesiculation/pustules over the eyelids/scalp, lid margin involvement, heliotrope/purplish discolouration, skin lesions in any other part of the body, swelling inside the oral cavity, difficulty in breathing or choking sensation or loss of weight. There was no history of scrotal/testicular pain/swelling, swelling of limbs, milky urine, pain abdomen, joint pains, breathlessness/wheeze, pain chest, headache, vomiting, diplopia/blurring of vision, facial asymmetry, hearing loss or hoarseness of voice.

General and systemic examination were unremarkable. The face revealed left sided periocular pitting oedema (Fig 1) with mild streaky erythema confined to the soft tissues around the eye. The temperature was not raised and lesion non tender. There was left preauricular lymphadenopathy with no generalised lymphadenopathy.

Routine haematological count revealed eosinophilia (absolute eosinophil count 2000/cumm). Urine examination and culture were within normal limits. Erythrocyte sedimentation rate was raised (60 mm 1st hr by Wintrobe method). Renal function parameters were normal. Liver function tests were normal and serum globulin fraction revealed raised Immunoglobulin E (0.04 mg/dl). Creatinine phosphokinase and serum glutamate oxalate transaminase levels were normal. Blood Widal and Weil Felix reaction were negative. Anti-nuclear antibody was found to be negative. Radiograph chest was normal. Nocturnal peripheral blood smear (midnight to 2 AM) after concentration by centrifugation revealed microfilaria of *Wuchereria bancrofti*. The same were also demonstrated in a daytime peripheral smear after administration of 150mg of diethyl carbamazine (DEC).

In view of history of recurrent attacks of fever associated with retrograde lymphangitis, presence of early lymphoedema and the demonstration of microfilaria, he was diagnosed as lymphatic filariasis with periocular filarial lymphoedema and managed with oral DEC in a dose of 6mg per kg body wt per day in 3 divided doses for a period of 2 weeks, with regression of periocular lymphoedema (Fig 2) and disappearance of microfilaria from the centrifuged midnight peripheral blood smear. He developed a repeat episode of similar periocular lesion six months later, which was successfully managed with a repeat exhibition of the above medication in the same dose.

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Fig. 1 : Periocular oedema on the left side of face

Patient is asymptomatic for the past one year.

Discussion

Lymphatic filariasis is endemic in India with the main vectors being the *Culex* mosquitoes. The dermatolymphangioadenitis (DLA) caused by the filarial worms may mimic cellulitis, urticaria, lymphoedema of malignancy, trauma, bacterial infection, thrombophlebitis, seborrhoeic dermatitis and other eczemas, heliotrope of dermatomyositis, etc.

Eye involvement in lymphatic filariasis in the form of elephantiasis or anterior chamber or subretinal microfilaria is rare. Conjunctival involvement has been reported leading to pain, chemosis, injection and foreign body sensation. Adult and maturing worms have been reported in the eyelids, lacrimal gland, anterior chamber, iris and subretina [3-6]. Chronic elephantiasis of the eyelid has been reported [7]. *Dirofilaria* have been found in the bulbar conjunctiva [8] as well as orbital tissue [9]. *Microfilaria* has also been isolated from the lacrimal gland, anterior chamber, iris, lens, retina and choroids [6,7,10]. However, these cases are rare.

The old adage of an uncommon manifestation of a common condition being more likely in any clinical situation than an uncommon condition, appears to be

Fig. 2 : Regression of periocular lymphoedema in the above case true in this case.

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