Axillary Mass - An Unusual Presentation of Filariasis

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Abstract

Lymphatic filariasis is a major public health problem in India with most infections being caused by Wuchereria bancrofti. Clinical manifestations depend on the area of lymphatic involvement and the duration of infection. The present case report is that of an axillary mass which clinically resembled a lipoma and on aspiration revealed the presence of numerous microfilariae in a fluid background. This case is being reported for the rarity of presentation of filariasis as an isolated axillary lymphovarix with absence of adjacent enlarged lymph nodes, microfilaraemia or peripheral blood eosinophilia.

Introduction

Filariasis is an endemic disease in many parts of South East Asia especially South India. The clinical presentations are varied and may present as lymphoedema of various parts of the body or recurrent attacks of acute dermatolymphangioadenitis. A majority of the patients are asymptomatic and the presence of this disease is seen as an incidental finding. The earliest change in lymphatic filariasis is dilation of lymph vessels, which are the habitat of the adult worms, which later on progresses to lymphatic dysfunction. This commonly manifests as lower limb lymphoedema, hydrocoele, chyluria or rarely groin lymphadenovarix.[1] Axillary lymphovarix is an extremely uncommon presentation of filariasis even in endemic areas.

Case Report

A 47 year old male complained of swelling in the left axilla of one week duration. There was no history of fever or any other significant clinical history. On examination he was of normal build, afebrile and not anaemic. There was a soft, mobile, non tender mass of about 5 cm in diameter in the anterior axillary fold. There was no other swelling or lymph node enlargement anywhere else and hepatosplenomegaly was not present. All blood counts and ESR were normal. Peripheral smear study was also normal. A provisional diagnosis of lipoma was made and the patient was subjected to fine needle aspiration of the mass. 3 ml of straw coloured fluid was aspirated and following aspiration the swelling reduced in size. The fluid was centrifuged and smears were made of the deposit. Examination of the smears showed numerous microfilariae in a background of few

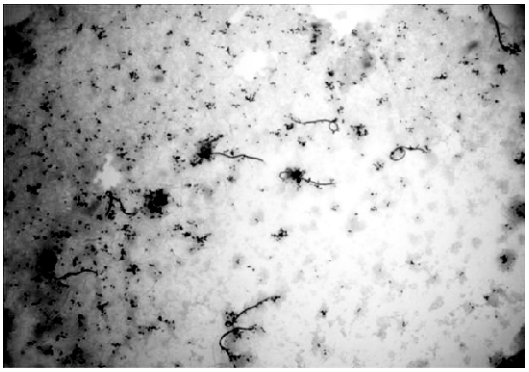

Fig. 1 : Smear showing numerous coiled worms of microfilaria in a background of lymphocytes and proteinacious material (H and E 40X)

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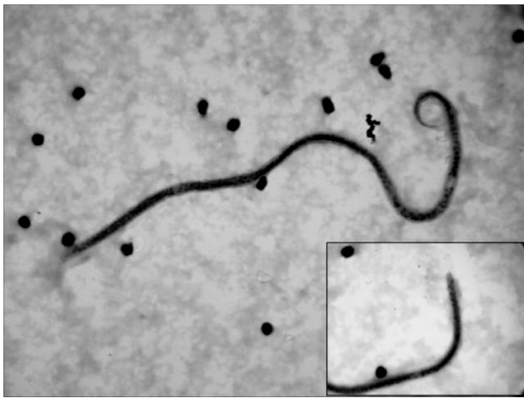

Fig. 2 : Smear showing a single sheathed micro filaria with discrete nuclei in the body. (H and E 400X). Inset showing absence of terminal nuclei (H and E 1000X)

lymphocytes and proteinaceous material.(Figs. 1 and 2) Following this an ultrasound of the swelling was done and this revealed a cystic mass with dilated lymphatic channels. Filarial dance sign was not seen in the dilated lymphatics. Retrospective examination of the genitalia showed no abnormality. A diagnosis of left axillary filarial lymphovarix was made. Patient was advised treatment with diethylcarbamazine citrate. However he did not report back after completion of the treatment.

Discussion

Lymphatic filariasis is a vector borne disease of the tropical and subtropical countries occurring due to infection by filarial worms which invade the lymphatics of humans. More than 1.1 billion people are at risk of the infection globally with about 120 million people in 80 countries actually being affected.[2] Lymphatic filariasis is mostly caused by Wuchereria bancrofti (90%). The presence of adult worms in the infected individual is confirmed by detecting microfilariae or filarial antigens in the patient's blood. Ultrasound scan (B mode or M mode) with or without colour Doppler or pulse wave Doppler can be used to detect live adult worms of W. bancrofti in the lymphatics (Filarial dance sign).[3] The diagnosis of filarial infection can also be made by detecting microfilariae on microscopic examination of fine needle aspirates. There are several case reports of microfilariae being identified in aspirates from lymph node, scrotal lymphatics, breast masses, thyroid, swellings, hydrocoele fluid, pericardial, pleural, ascitic and joint fluids.[4-7]

Our case is unique for the following reasons. A search of literature revealed only one previous case report of filariasis presenting as an axillary lump[3] with our case being the second report. However in the reported case there was lymphadenopathy, peripheral blood eosinophilia and microfilaraemia which were all absent in the present case. This is probably explained by differences in host response to the presence of the parasite.[8] Secondly ultrasound scan of the lymphatics did not show the filarial dance sign in spite of significant lymphangiectasia. Hence the only evidence for the diagnosis of a filarial mass was the detection of parasites in the fine needle aspirates.

Conclusion

The early stage of filarial infection is characterized by the presence of live adult worms in the lymphatics and microfilariae in the blood-the stage of asymptomatic microfilaraemia. Hence the diagnosis of filarial infections by study of centrifuged deposits of fluid aspirates becomes imperative in endemic areas where patients present with such swellings and dilated lymphatics.

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LONGACTING EXENATIDE IN DIABETES : DURATION-3

Incretins have been the focus of antihyperglycaemic drug development for nearly a decade. Two broad classes of agents, glucagon-like peptide-1 (GLP-1) analogues and dipeptidyl peptidase-4 (DPP-4) inhibitors, have been in clinical use. The Diabetes Management for Improving Glucose Outcomes (AMIGO trials), with the GLP-1 receptor agonist exenatide, showed that exenatide reduced blood glucose with low risk of hypoglycaemia.

Exenatide has to be given subcutaneously twice daily, so researchers have focused on developing more convenient longer-acting compounds : exenatide as a poly-lactide-glycolide microsphere suspension with 3% peptide content, given once weekly; and liraglutide, a GLP-1 analogue, with substitution of Lys34 with Arg34 and an attachment of C-16 free fatty acids via a glutamoyl spacer to Lys26, given once daily. In a 30-week, randomised open-label trial in almost 300 patients with type 2 diabetes, treatment with longacting exenatide led to better improvements in fasting blood glucose, glucagon and HbA_{1c} ***than*** did exenatide given twice daily.

Michaela Diamant and colleagues show superior efficacy of longacting exenatide compared with insulin glargine in reduction of HbA_{1c}, postprandial glycaemic excursions, and weight over 26 weeks, in an open-label randomised trial (DURATION-3) in about 450 patients with type 2 diabetes. Additionally, more patients discontinued exenatide than glargine due to nausea and injection-site reactions. Drug-induced nausea, although less common with longacting than with twice-daily exenatide, could be troublesome in patients who are taking multiple drugs including metformin and who have diabetic gastroparesis.

Is longacting exenatide an important advance for the treatment of type 2 diabetes? On the downside, unfavourable pancreatic effects (e.g., anecdotal reports of pancreatitis with exenatide, and one case of oedematous pancreatitis in Diamant and colleagues' study) should be strictly monitored.

Renal dysfunction, recently observed during exenatide therapy, needs continuing pharmacovigilance. Being non-human peptides, exenatide and its longacting preparation lead to antibody formation in 41-49% of patients on the drugs.

Today's study enables us to take another small step forward in the treatment of type 2 diabetes, but more is possible. New ideas are around, and some studies are underway : to increase the antihyperglycaemic efficacy and reduce the adverse effects of GLP-1 receptor analogues; to design a GLP-1 super-agonist; to use other routes of administration (inhaled, nasal etc); dual use of basal insulin and a GLP-1 receptor agonist; and finally, earlier use of these drugs in the course of diabetes.

A GLP-1 receptor analogue might be suitable in at least two subgroups of patients with type 2 diabetes : those with obesity and those in whom hypoglycaemia is a clinical concern.

ANOOP MISHRA, SHASHANK JOSHI, THE LANCET : 2010; 375, 2198-2199