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Diagnosing imported filarial infections: 25 years of experience at the Hospital for Tropical Diseases, London

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Background: Filarial infections are a common causes of an eosinophilia in returning travellers and immigrants. The varied clinical presentation of filariasis often cause delays in diagnosis and results in poor outcomes. We aimed to describe both the disease presentation in our cohort at the Hospital for Tropical Diseases (HTD), and the laboratory tests used to arrive at a diagnosis.

Material/methods: Demographic, clinical, and laboratory data were prospectively and retrospectively collected from clinical notes and electronic databases at the HTD between 1990 – 2014. All cases where the treating physician made a final diagnosis of filariasis were analysed. Patients were divided into three groups for purpose of analysis - travellers (less than 6 cumulative months in filariasis endemic countries), expatriates and patients born in an endemic area.

Data were analysed with SPSS for Windows, performing Spearman's ranked correlation or Mann-Whitney U tests where appropriate.

Results: Between 1990-2014, there were 89 cases of filariasis at the HTD. The median age of the cohort was 34 years (range 16–75), and the majority were men (58/89; 65%). Just over half the patients diagnosed with filariasis (45/89; 51%) were originally from Africa. Most of the patients were born and lived in an endemic country (42/89: 47%), followed by travellers (29/89; 33%); and expatriates (18/89; 20%). 76/89 patients (85%) were symptomatic at presentation, the remainder of patients (13/89; 15%) were referred to HTD due to eosinophilia or for a routine post-travel screening.

Of the 89 patients diagnosed with filariasis, 48/89 (54%) had loiasis , 30/89 (29%) lymphatic filariasis, and 11/89 (12%) onchocerciasis. Eosinophilia was present in 63% of cases. There was a significant negative correlation between eosinophil count and duration of stay (r= -0.241, 95% confidence interval [CI]: -0.44 – -0.005, p = 0.045). Filarial serology was performed in 92% of cases and was positive in 54/89 cases (61%). There was a significant negative correlation between filarial serology and time since exposure (r = -0.357, 95% confidence interval [CI]: -0.821– -0.050 , P = 0.028).

Conclusions: To our knowledge this is the largest single centre study series describing imported filariasis. These data help understand the demographics, clinical presentation and diagnostic limitations of patients presenting with filarial diseases. We have illustrated the diagnostic methods used, and any suspected cases should be referred to a specialist centre.