

Diagnosing imported filarial infections: **30** Years Experience at the Hospital for Tropical Diseases, London

Marta Gonzalez Sanz, Zaneeta Dhesi, Darius Armstrong-James, Margaret Armstrong, Michael Brown, Christopher Whitty. Special acknowledgement to: Chloe Sanderson, Giovanna Cowley and Prof Chiodini



University College London Hospitals 
NHS Foundation Trust

Hospital for Tropical Diseases
University College Hospital London
United Kingdom



Lymphatic filariasis

Wuchereria bancrofti

Brugia spp

Mansonella spp

Over 67 million infected

Over 36 million disfigured or incapacitated

More than 1 billion people at risk in 73 countries



Onchocerciasis (River Blindness)

Onchocerca volvulus

Over 37 million infected

4 million suffer from severe itching or dermatitis

265,000 are blind

About 187 million at risk in 36 countries



Loiasis

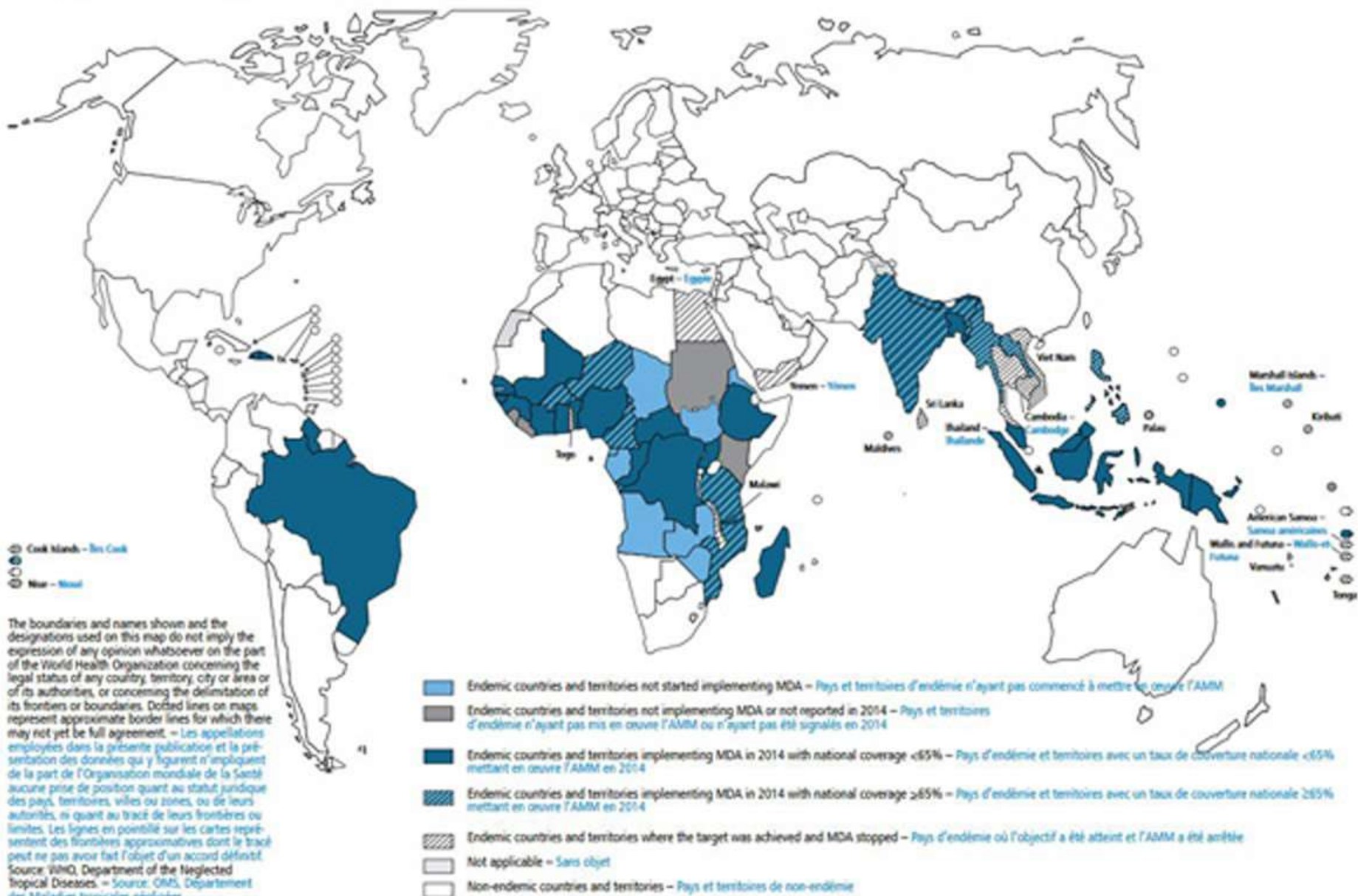
Loa loa

About 13 million people infected

Nearly 30 million at risk

Map 1 Countries where lymphatic filariasis is endemic and status of mass drug administration (MDA) in those countries, 2014

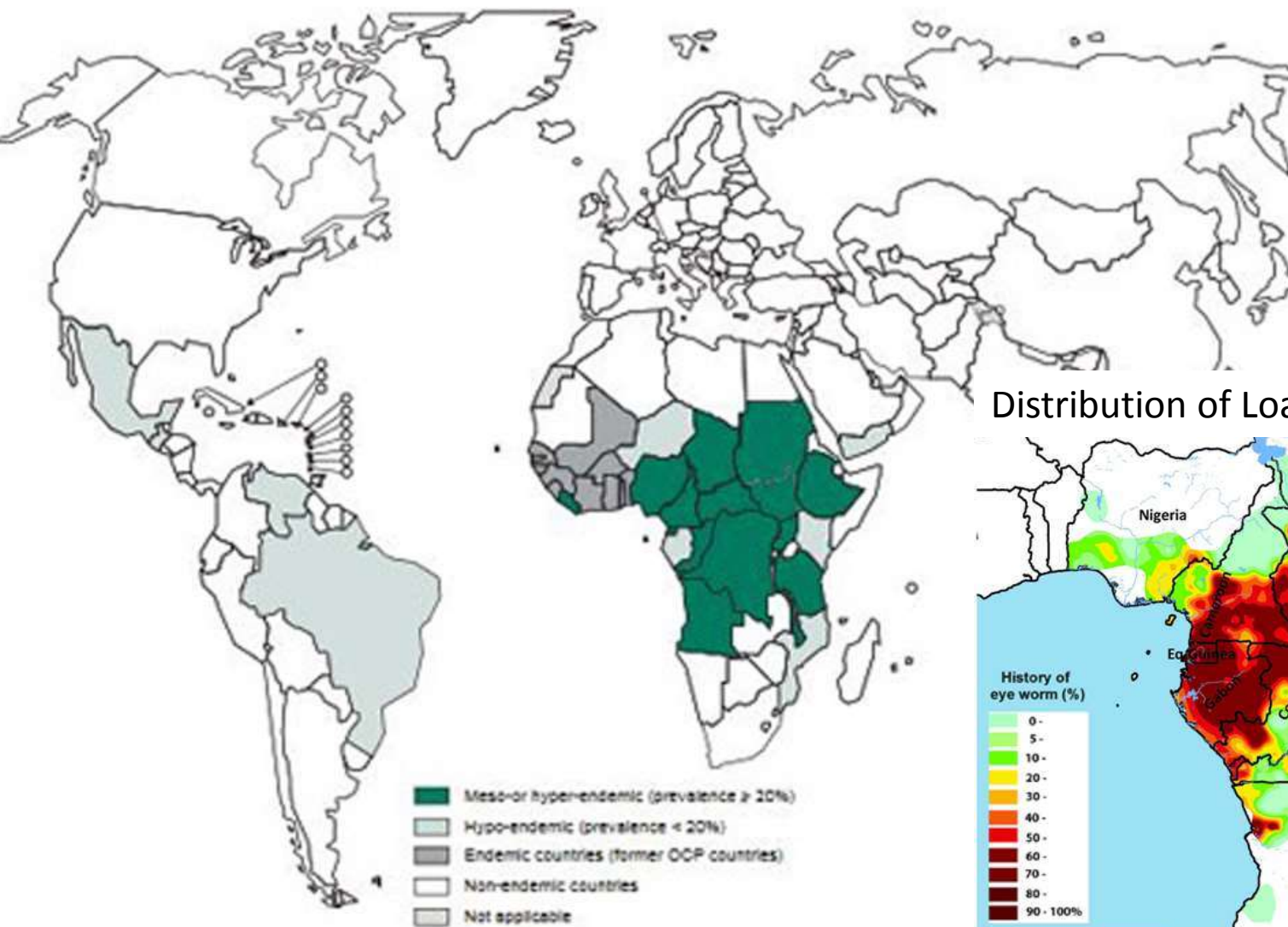
Carte 1 Pays où la filariose lymphatique est endémique et situation de l'administration massive de médicaments (AMM) en 2014



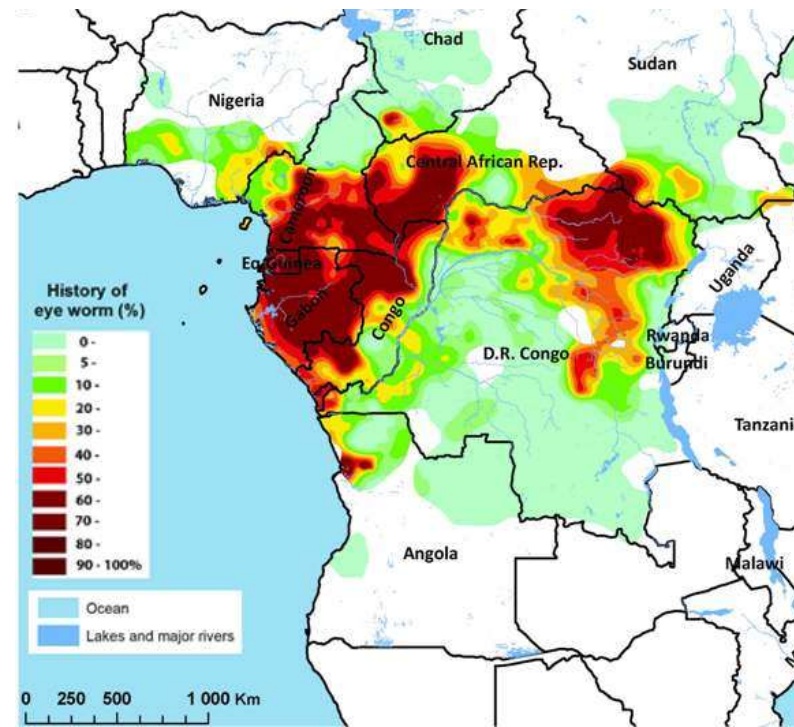
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. – Les appellations employées dans la présente publication et la présentation des données qui y figurent n'impliquent de la part de l'Organisation mondiale de la Santé aucune prise de position quant au statut juridique des pays, territoires, villes ou zones, ou de leurs autorités, ni quant au tracé de leurs frontières ou limites. Les lignes en pointillé sur les cartes représentent des frontières approximatives dont le tracé peut ne pas avoir fait l'objet d'un accord définitif.

Source: WHO, Department of the Neglected Tropical Diseases. – Source: OMS, Département des Maladies tropicales négligées.

Distribution of onchocerciasis, worldwide, 2014



Distribution of Loasis

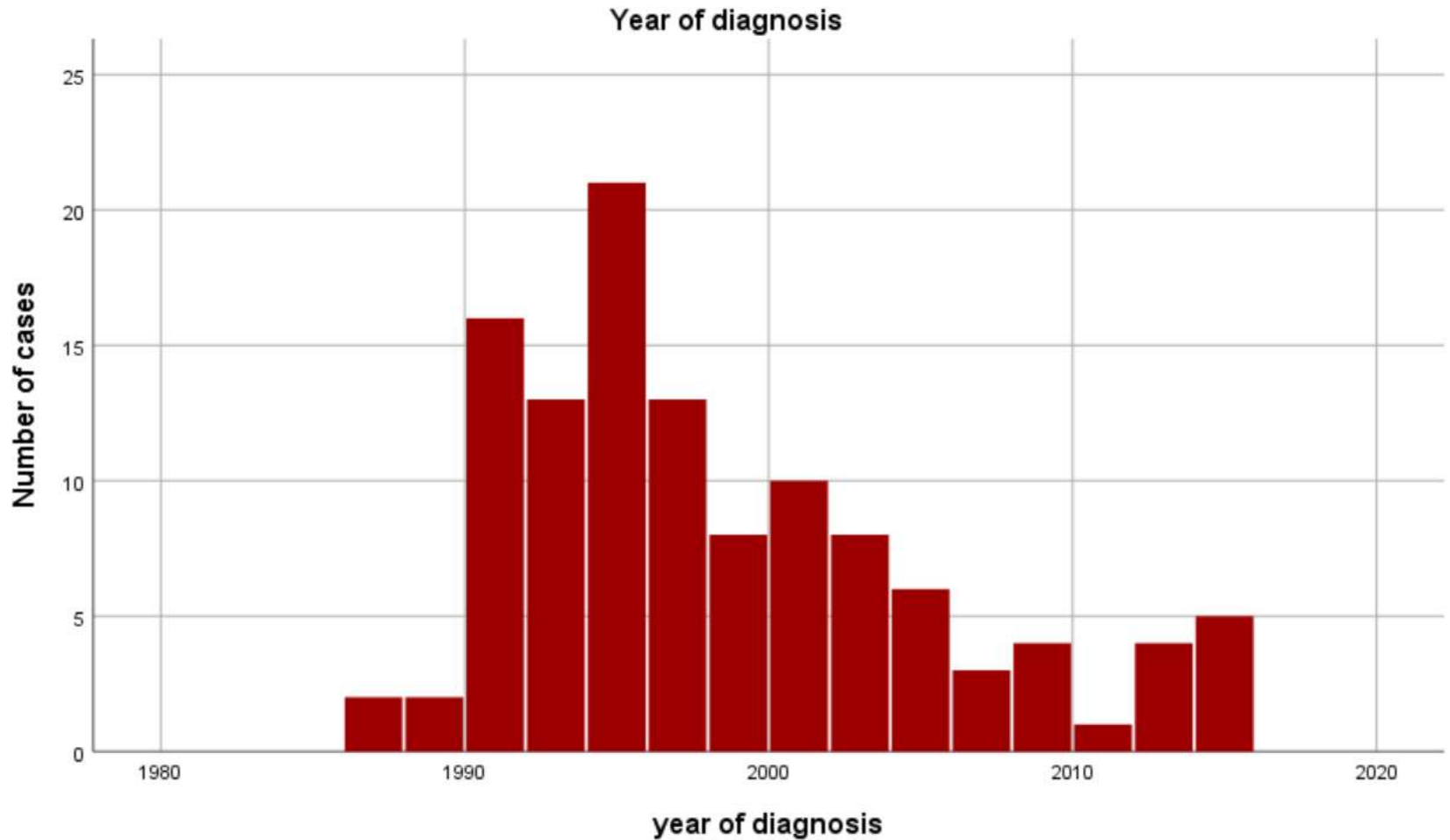


MATERIAL AND METHODS

- Retrospective review of filariasis cases seen in the last 30 years (1987-2016) at the Hospital for Tropical Diseases
- Inclusion criteria:
 - Parasitological confirmed cases
 - Managed at Hospital for Tropical Diseases
 - Availability of notes
- Identification of cases through parasitology lab book
- Revision of case notes

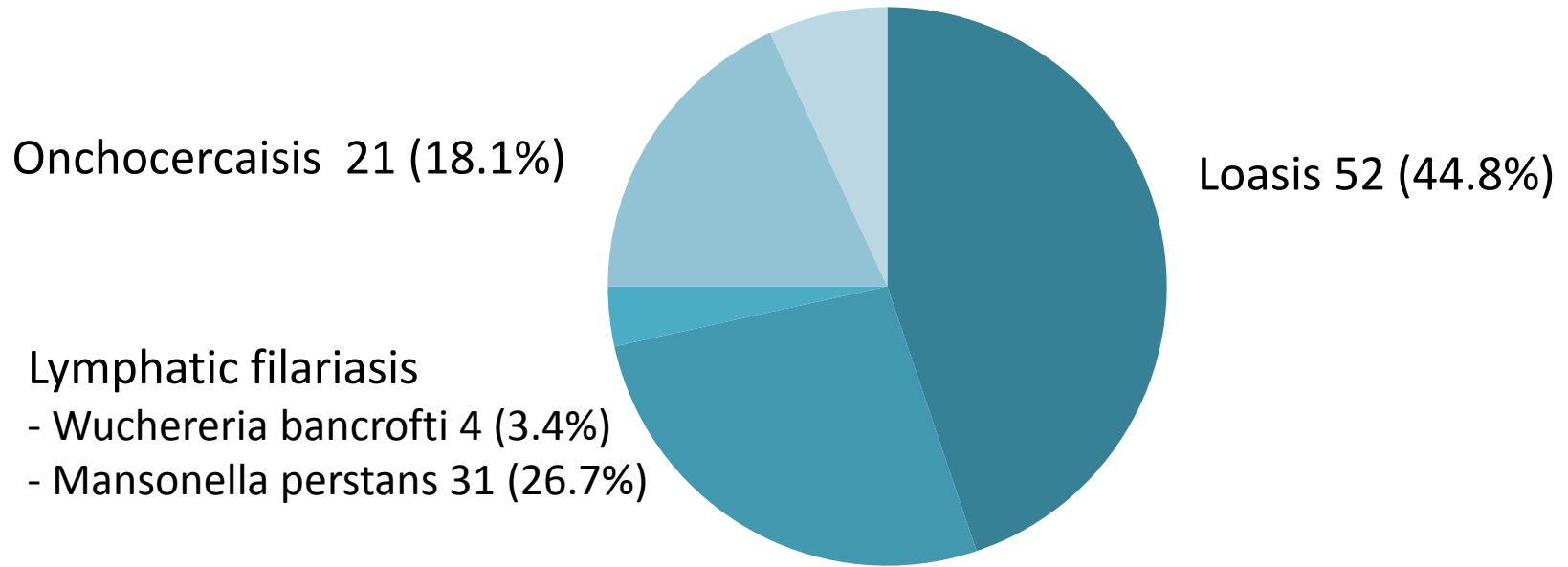
RESULTS

- N=116



Filarial disease

Co-infection



- Co-infection:
 - 2 cases Loa loa and Onchocerca
 - 1 case Loa loa, Onchocerca and Mansonella
 - 3 case Loa loa and Mansonella
 - 2 cases Mansonella and Onchocerca

Demographics and travel

- N=116
- Male 75 (64.7%)
- Median age at diagnosis 30. 63 years (8-88)
- Born in an endemic area: 67 (57.8%)
- Ethnic origin
 - 67 (57.8%) Black African
 - 38 (33%) Caucasian
 - 4 (3.4%) Caribbean
 - 1 (0.9%) Asian
- Region of acquisition
 - 101 cases (87.1%) acquired in Africa
 - 11 cases (9.5%) travelled to more than one continent
 - 3 cases (2.6%) acquired in America (Guyana)
 - 1 case acquired (0.9%) in Asia (India)
- Duration of exposure:
 - Median duration of exposure 17 years (1 cumulative month – 68 years)
 - In travellers median 11 months (1 month cumulative – 23 years)



	All filariasis N=116	Loiasis N=52	Lymphatic filariasis N=35	Onchocerciasis N=21
Pruritus	53 (45.7%)	21 (40.4%)	10 (28.6%)	17 (81%)
Loa loa in eye	33 (28.4%)	29 (55.8%)	0	0
Skin manifestations	32 (27.6%)	8 (15.4%)	9 (25.7%)	12 (57%)
Malaise	19 (16.4%)	9 (17.3%)	5 (14.3%)	2 (9.5%)
Subcutaneous nodules	22 cases (18.9%) were asymptomatic			5 (23.8%)
Fever	10 (8.6%)	4 (7.7%)	4 (11.4%)	0
Lymph node involvement	9 (7.8%)	0	2 (5.7%)	6 (28.6%)
Lymphoedema	7 (6.0%)	0	4 (11.4%)	3 (14.3%)
Calabar swelling	7 (6.0%)	6 (11.5%)	0	0
Eye involvement	3 (2.6%)	0	0	3 (14.3%)
Scrotal swelling	3 (2.6%)	0	2 (5.7%)	1 (4.8%)

Diagnosis

	All filariasis N=116	Loasis N=52	Lymphatic filariasis N=35	Onchocerciasis N=21
Eosinophilia	92/116 (79%)	45/52 (86%)	23/34 (67%)	5/16 (76.2%)
Filarial serology	73/111 (66%)	29/48 (60%)	26/35 (74%)	12/21 (57.1%)
Day bloods	91/113 (80%)	48/52 (92%)	32/35 (91%)	4/18 (22%)
Night bloods	42/61 (69%)	20/23 (87%)	15/18 (83%)	3/14 (21%)
Skin snips	25/72 (35%)	4/31 (13%)	0/15 (0%)	18/20 (90%)
Biopsy	9/10 (90%)	5/5 (100%)	1/2 (50%)	2/2 (100%)

- Concomitant parasitological diagnosis:
 - 1 case of malaria
 - Strongyloides serology 28/29 (culture confirmed in 4)
 - Schistosoma serology 24/99 (eggs found in 5 stool samples and 1 urine sample)
 - STH: 12/94

Take home message

- Filarial diseases decreasing
- Presentation can be non specific or asymptomatic
- Co-infection is common
- Eosinophilia and positive filaria serology not always present
- High level of suspicion
- Knowledge endemic areas
- Management by specialised centre
- Combination of diagnostic methods

ANY QUESTIONS?

THANK YOU