

LYMPHATIC FILARIASIS

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Learning Objectives

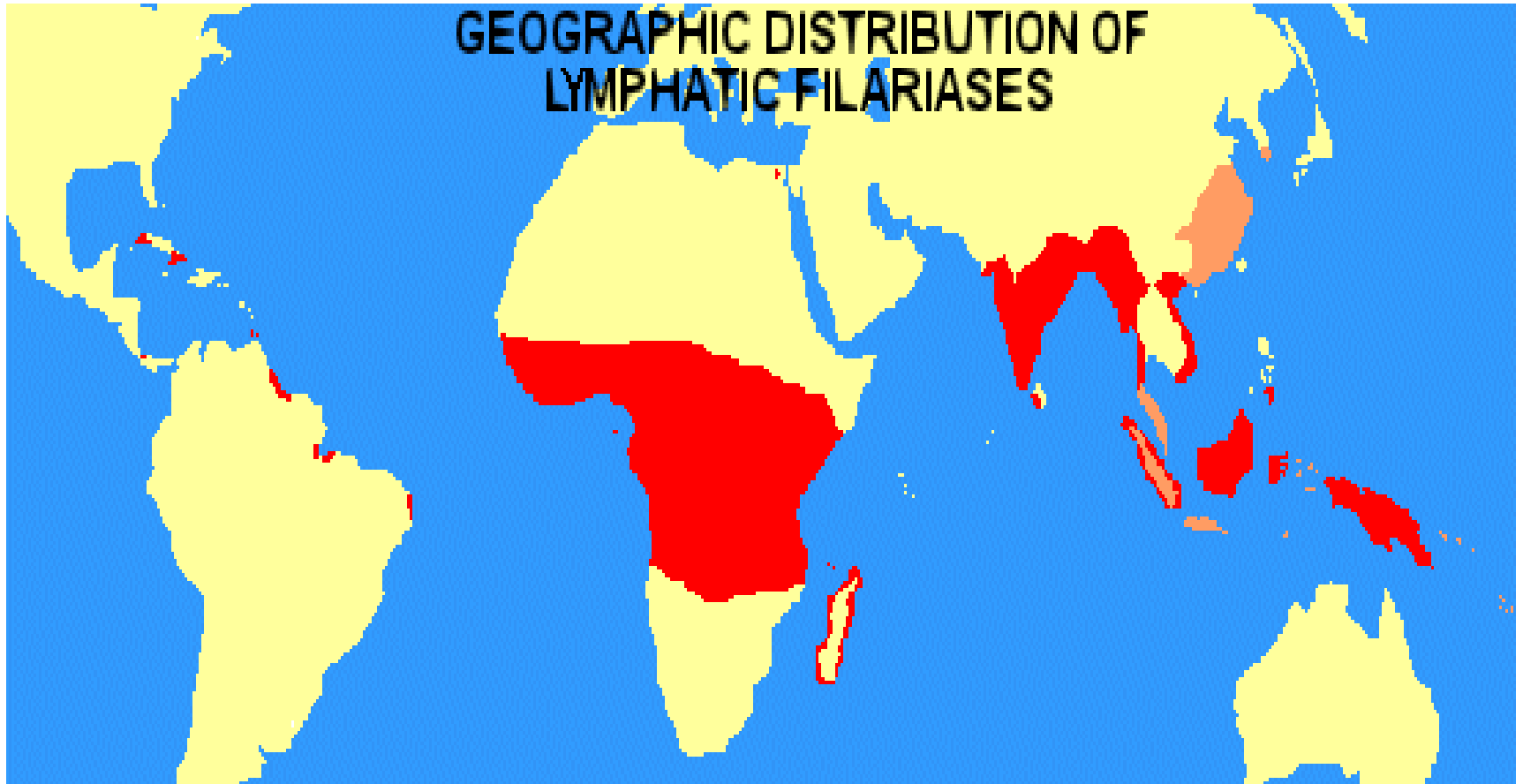
At the end of this lesson, the learner should be able to:

- Classify the parasite causing lymphatic filariasis
- Outline geographical distribution of parasites causing lymphatic filariasis
- Describe clinical manifestations of lymphatic filariasis
- Describe the tests used to diagnose lymphatic filariasis
- Outline treatment of lymphatic filariasis

1.0 Introduction -1

- LF caused by filarial tissue nematodes
- *Wuchereria bancrofti*, *Brugia malayi* & *Brugia timori*
- Adults in lymphatic system, microfilariae in blood
- 120M infected, >40M with clinical disease globally
- Geographical distribution
 - Asia - China, India, Indonesia, Malaysia, Philippines
 - Africa – E. African coast (Ethiopia to Mozambique; W. African coast (Nigeria, Ghana, Ivory Coast etc)
 - Central & South America
 - Pacific Islands

GEOGRAPHIC DISTRIBUTION OF LYMPHATIC FILARIASES



Introduction-2

- Associated with warm humid climates
- Found both in rural & urban communities
- Age-specific prevalence rises with age
- Gender differences associated with cultural practices resulting in differential exposure to infection between sexes in different communities
- Vector borne – transmitted by different mosquito species (Aedes, Anopheles, Culex, Mansonia)



Microfilaria, *Wuchereria bancrofti*



Microfilaria, *Brugia malayi*

2.0 Clinical presentation

- Early stages (acute manifestations)
 - Fever, chills
 - Lymphadenitis, lymphangitis
 - Orchitis, epididymitis
- Late stages (chronic manifestations)- blockage of lymphatic flow
 - Lymphoedema of legs, arms or breast
 - Elephantiasis (legs, arm, breast, scrotum)
 - Hydrocele
 - Chyluria (whitish urine)
 - Tropical pulmonary eosinophilia (TPE)



Lymphoedema



Lymphoedema



Elephantiasis



Hydrocele

3.0 Diagnosis

- History of living in the endemic areas of years
- Physical examination findings
- Blood examination (night sample) for microfilariae
 - Thick blood smear
 - Capillary tube exam
 - Blood filter (nucleopore)
- DEC provocation test (DEC 50mg, blood >30 min)
- Ultrasound of the scrotum – filarial dance sign
- Serological tests – filarial specific antibodies e.g. IgG; circulating filarial antigen (CFA)

4.0 Treatment

- Diethyl Carbamazine (DEC)
 - Should not be used in places with there is onchocerciasis occurring together with LF
- Ivermectin
- Albendazole

DEC or Ivermectin can be used alone or in combination with Albendazole