Leishmaniasis

Clinical Tropical Medicine

FACTM (Clinical) Pt 1

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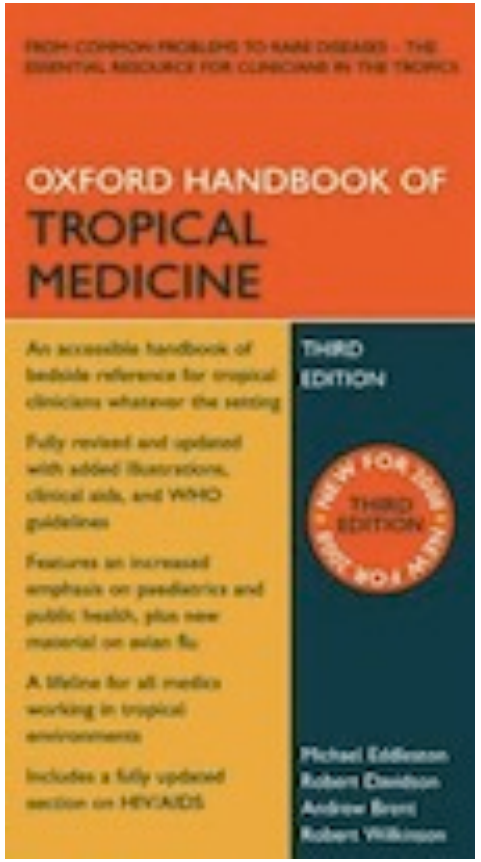
Leishmaniasis

LEISH 1 Clinical Tropical Medicine
LEISH 2 Clinical Parasitology



Reading

Oxford Handbook of Tropical Medicine.
3rd edn. Eddleston et al. OUP, 2008.

Manson's Tropical Diseases.
Cook GC et al. 22nd edn. Ch 77, Leishmaniasis
ISBN 978-1-4160-4470-3

Outline

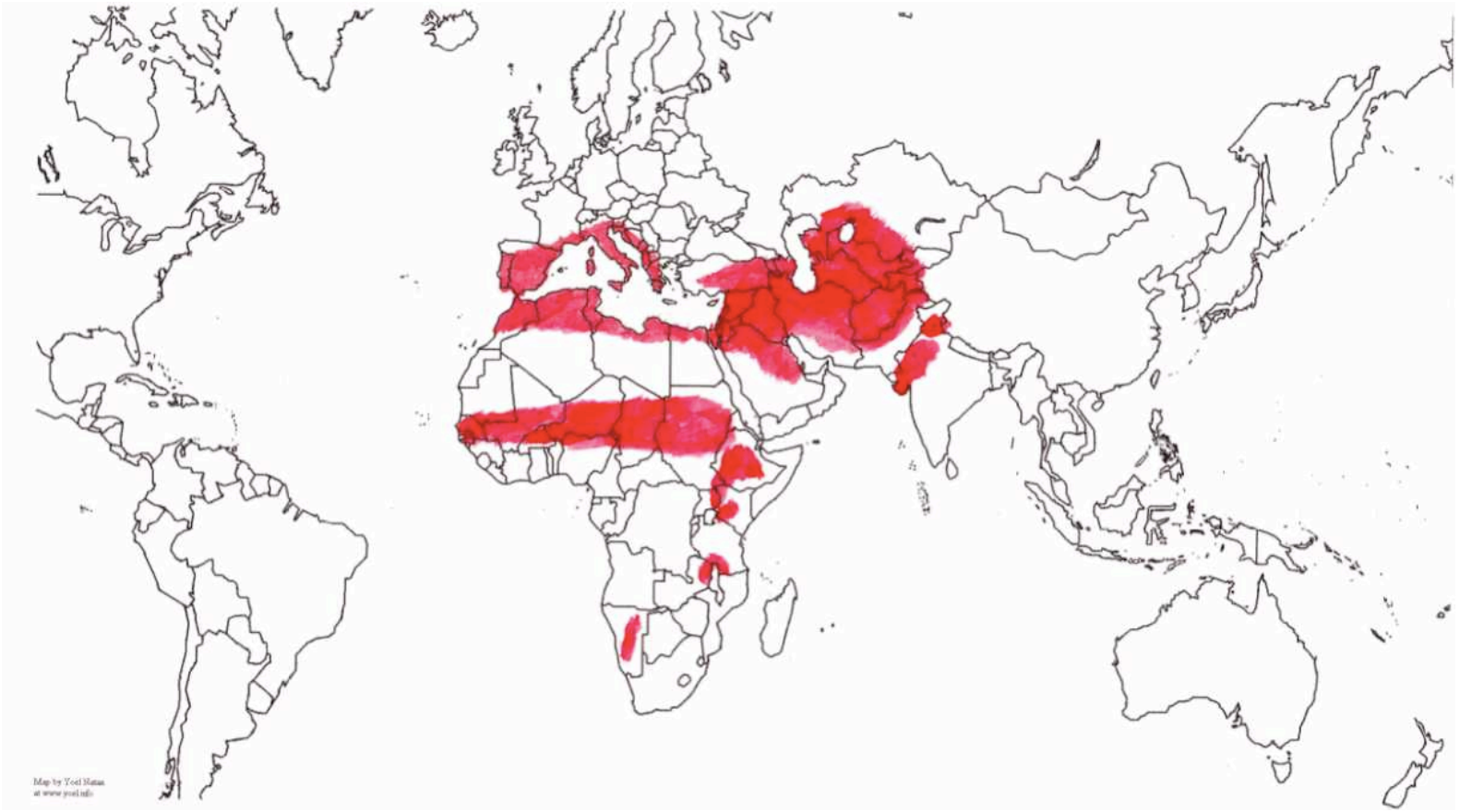
- Origins – CL known since early history

- Classical presentation
  - Cutaneous: CL - oriental sore, Aleppo boil, chiclero ulcer
  - Mucocutaneous: MCL – espundia
  - Visceral: VL - kala azar, dumdum fever
  - Others: PKDL, DCL, LR

- Setting
  - history of travel or previous residence overseas

Epidemiology

- **Where**
  - Old & New World, inter-tropical region, temperate S America, S Europe, Asia
  - Locations where parasite, mammalian host & sand flies co-exist
- **Who**
  - former residents & visitors to endemic areas
- **When**
  - following sand fly bite



CL, Old World

CL, New World

VL

Pathogenesis

- Parasite (promastigote) inoculated during sand fly bite
- Ingestion by macrophage
- Conversion to amastigote stage
- Incorporation in parasitopherous vacuole
- Rupture of macrophage, ingestion of contents by another macrophage
- CL: Development of skin lesion
- VL: dissemination via lymphatics, further ingestion by cells of RES

CMx: assess

- **Key questions**
  - Has the patient travelled or lived outside Australia?
  - Has the patient been exposed to biting insects?

- **Examination**
  - Skin lesion: ulceration, heaped edge, exudate, pain
  - Regional lymph nodes, nose & mouth
  - Liver & spleen, visible abdominal distension
  - Anaemia, bleeding tendency, wasting

CMx: investigate

- **Key issues**
  - Skin lesion: does the patient CL or MCL?
  - Systemic infection: could the patient have VL?

- **Biopsy:** spleen, bone marrow, nodes, blood
- **Culture:** NNN medium
- **PCR assays**: rapid, specific but limited availability
- **Immunodiagnostic tests:** immunoblot, UAT

CMx: decide

- Active or conservative Mx?
- Which antiparasitic agent?
- Is there a secondary bacterial infection?
- What kind of follow-up

CMx: act

Leishmaniasis	Preferred Rx	Alternative Rx	Comment
Cutaneous (CL)	Conservative if single, small lesion	Sodium stibogluconate x 20d	Local infiltration, imidazoles
Mucocutaneous (MCL)	Sodium stibogluconate		
Visceral (VL)	Liposomal amphotericin, short course: 5d & dose at 10^{th} d	Sodium stibogluconate x 28d; Meglumine antimoniate x 28d	Meltifosine may be useful in S Asia. Follow up prophylaxis

Vaccines

Progress? None licensed.

Recombinant parasite & virus candidates, synthetic peptide.

Crude prep for dog vaccination

Other approaches to control

- **reservoir** forest clearance, dog culls, rodent elimination, treatment programmes
- **insect vectors** clothing, bed nets, repellent, insecticide

Emerging issues

- **Imported disease** – refugees, military personnel
- **Antiparasitic agent resistance** – pentavalent antimonials
- **Risk of relapse in VL after Rx completion, PKDL**
- **Co-infection with HIV/AIDS,** S Europe