

Challenges and Opportunities for Dermatologists to Influence: Experiences on Leishmaniasis in the Middle East

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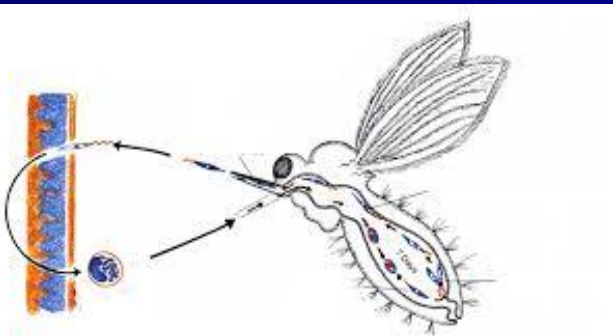
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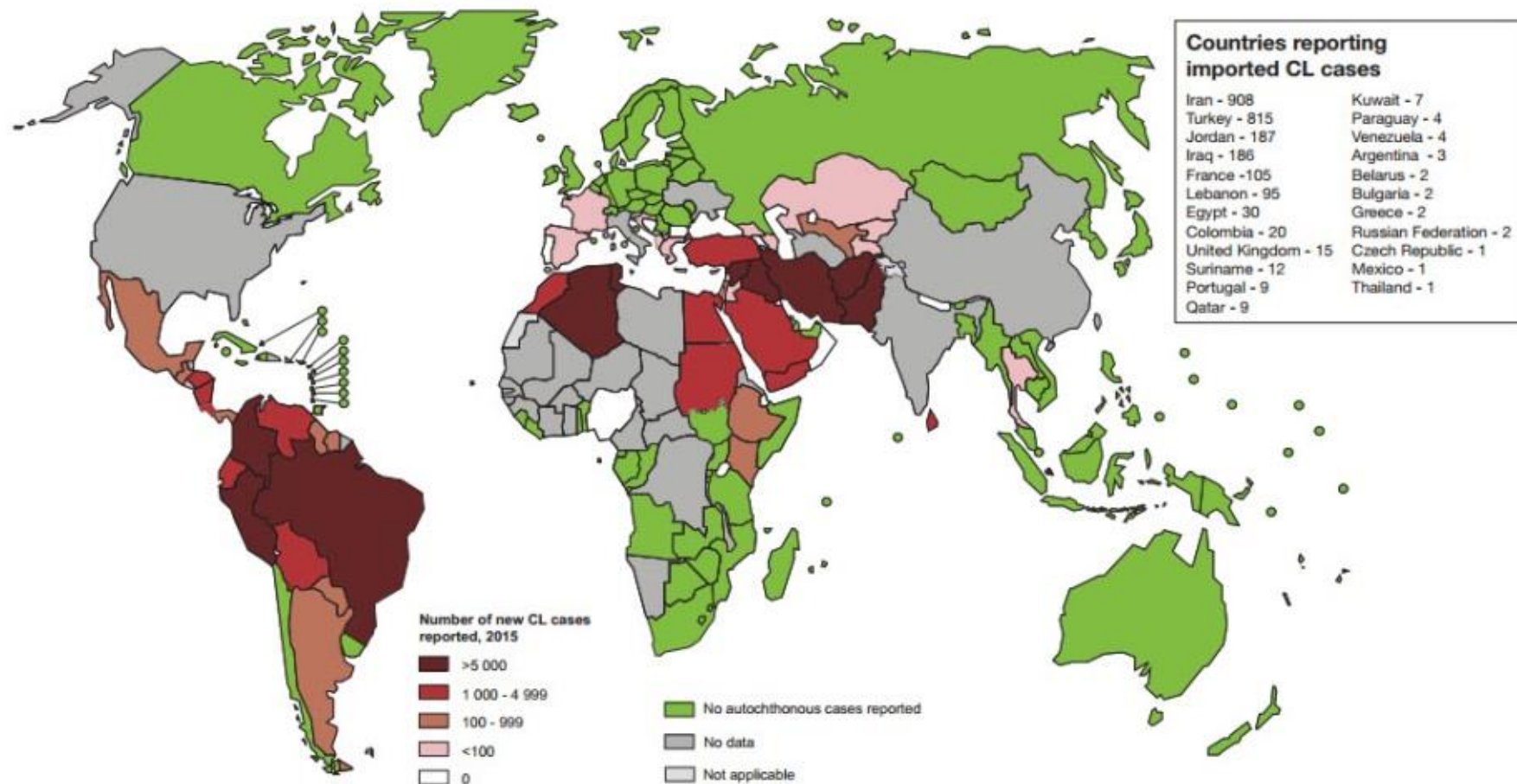




Introduction

- There are 600,000 to 1,000,000 new cases of cutaneous leishmaniasis (CL) annually in the form of New World and Old World CL.
- The majority of CL cases occur in 6 countries: Algeria, Afghanistan, Iran, Syria, Brazil and Colombia.
- Old World Cutaneous Leishmaniasis (OWCL) occurs mainly in Asia, the Middle East, Africa and Southern Europe.
- It is caused mainly by *L.tropica* in urban areas and *L.major* in rural/desert areas.
- OWCL is on the rise, especially due to deforestation, climate and ecological changes, poverty and war.

Status of endemicity of cutaneous leishmaniasis worldwide, 2015



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Data Source: World Health Organization
Map Production: Control of Neglected Tropical Diseases (NTD)
World Health Organization

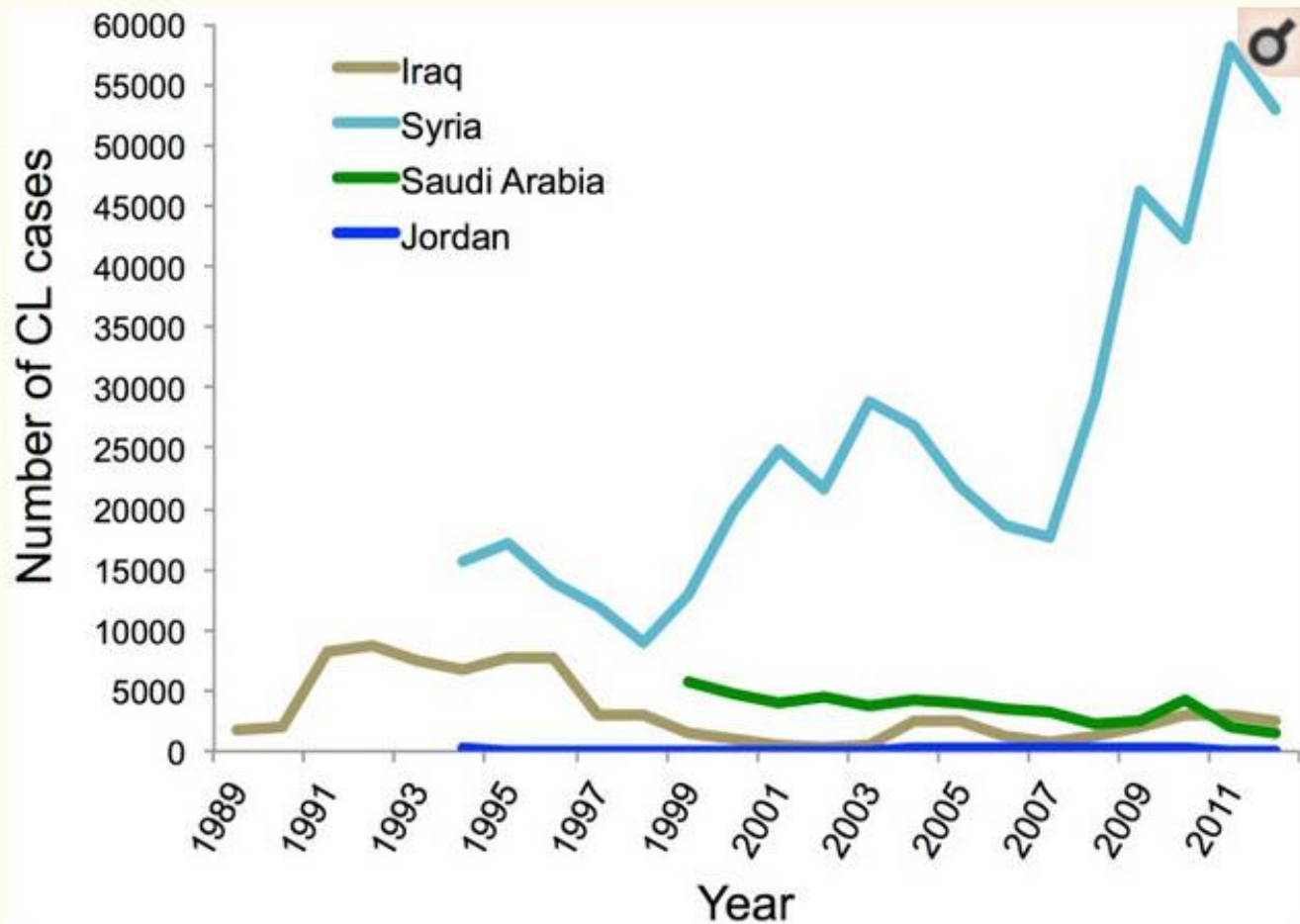
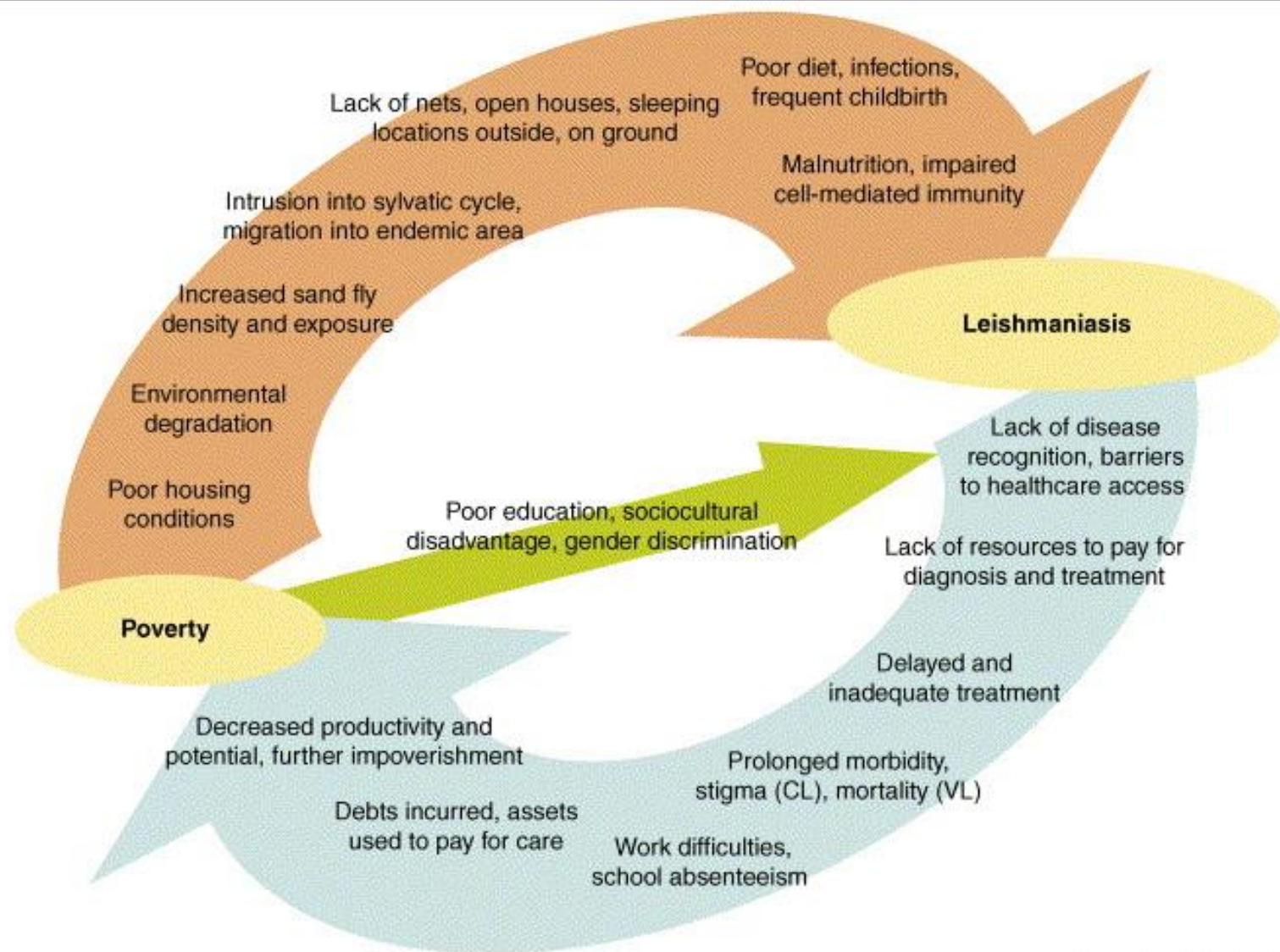


Figure 1

Year-wise trend of CL cases reported in Middle East.

Data is based on WHO reports for each country [48].



Clinical Presentations of OWCL

- Papulonodular with/without Ulcers
- Plaque with/without Satellite Lesions
- Ulcerative Plaque
- Eczematoid
- Lupoid
- Zosteriform/Crateriform
- Hyperkeratotic/Vegetative
- Erysipeloid
- Sporotrichoid
- Diffuse
- Involving Mucous Membrane
- Post Leishmanization

Papulonodular



Papulonodular with ulcers



Ulcerative Plaque



Ulcerative Plaque



Eczematoid



Hyperkeratotic/Vegetative



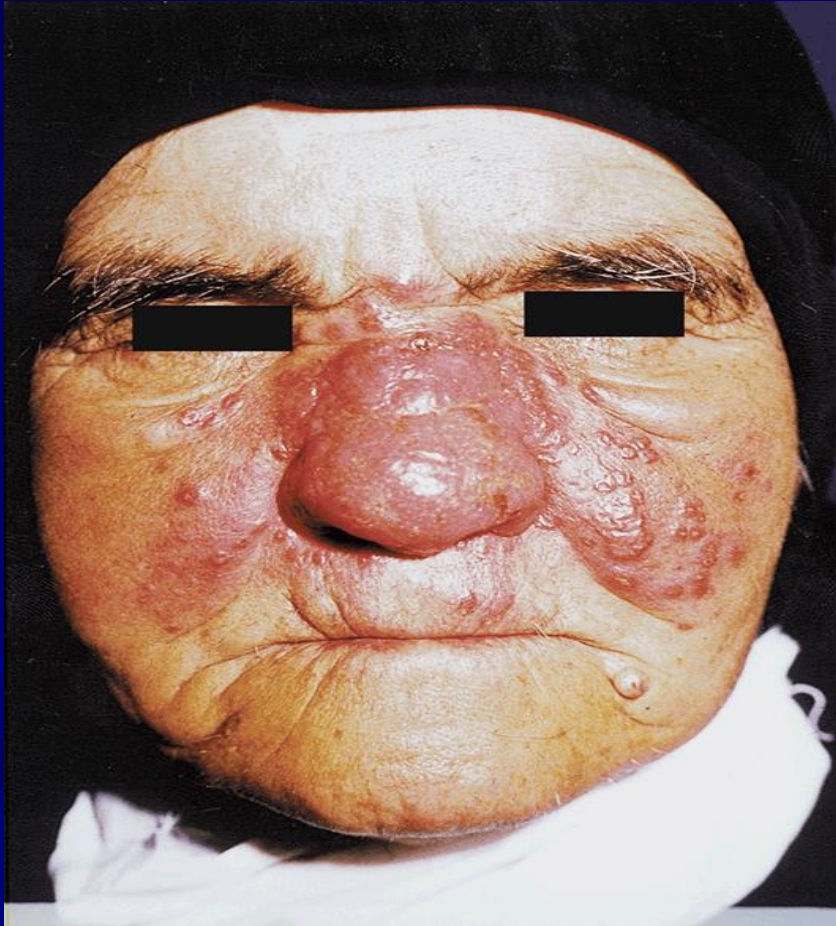
Lupoid CL



Sporotrichoid



Erysipeloid Leishmaniasis



Extensive and Diffuse CL



Treatment Options I

Regional and MoH guidelines for OWCL treatment exist but implementation is variable according to each center. Here is what is usual practice in **my** center:

- For patients with low number of lesions (especially in children), the first line of treatment is using cryotherapy (multiple sessions on a weekly basis).
- For patients with low number of lesions and preferably not on the face, who can not come for weekly cryotherapy, intralesional antimonials is used on a weekly basis.
- For patients with high number of lesions and widespread, systemic antimonials is used (even in children).
- For resistant cases and as an alternative to antimonials, amphotericin B can be used (both as conventional form or liposomal).

Treatment Options II

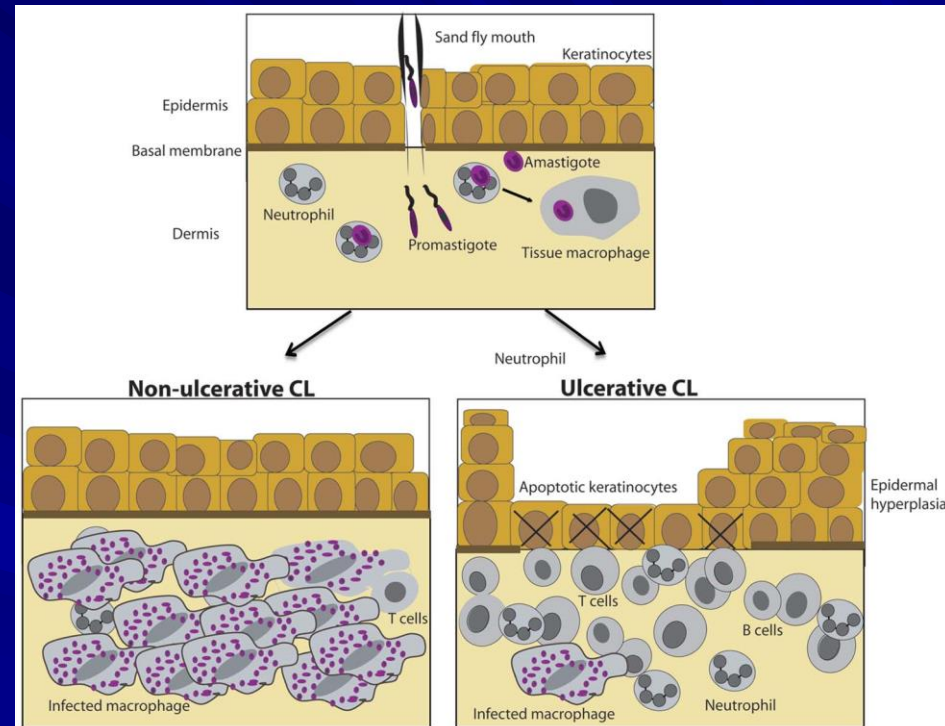
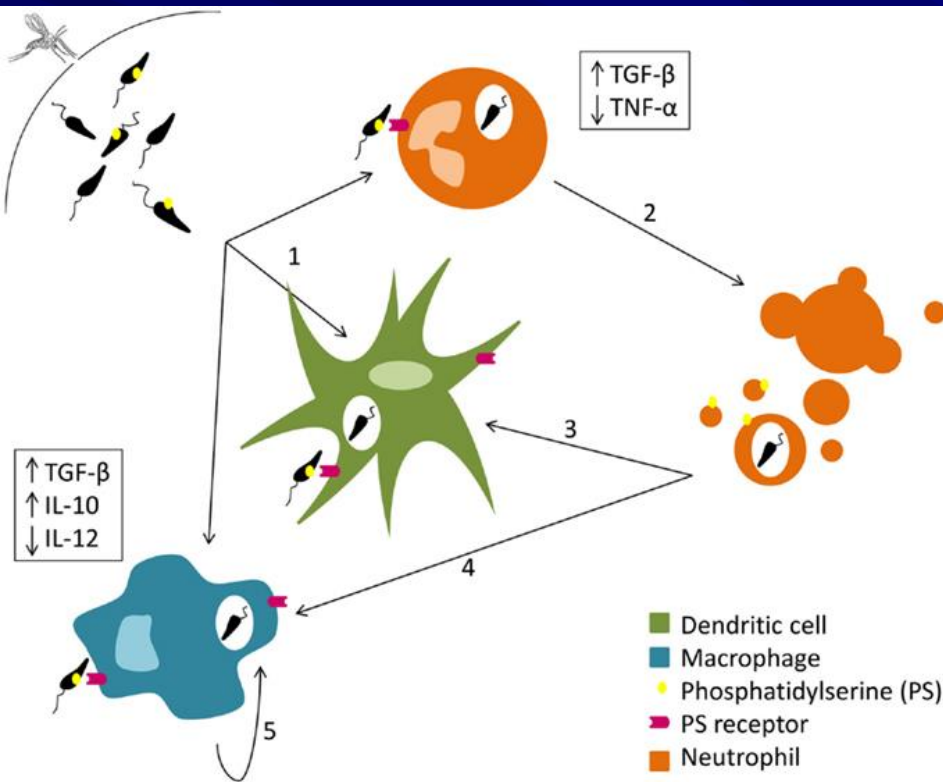
- A number of other treatment options i.e topical azole creams, topical paromomycin, topical oral azithromycin, oral metronidazole, oral fluconazole, oral rifampin, and oral allopurinol (with or without Glucantime), have been used in specific circumstances or when patients are unresponsive to conventional treatment.
- A number of patients refer with superimposed infection necessitating the addition of oral and sometimes systemic antibiotics (usually against staph. aureus) before or in conjunction with anti-leishmania treatment.

Newer Treatments for CL

- Topical amphotericin B /Topical liposomal amphotericin B
- Topical gentamicin + paromomycin
- Herbal remedies
- Immunochemotherapy (vaccine candidates + anti-leishmania drugs).

and..... The quest for a Vaccine continues...

Fascination with Immunology



CL: Burden of Disease

- In 2013, the global mean age standardized DALYs for CL was 0.58 per 100,000 people.
- Nine countries had significantly greater DALYs from CL than the mean: Afghanistan (87.0), Sudan (20.2), Syria (9.2), Yemen (6.2), Iraq (6.0), Burkina Faso (4.8), Bolivia (4.6) and Haiti (4.1).
- The burden from CL mainly falls on countries in Africa and the Middle East.

Karimkhani C et al; Lancet Infect Dis 2016

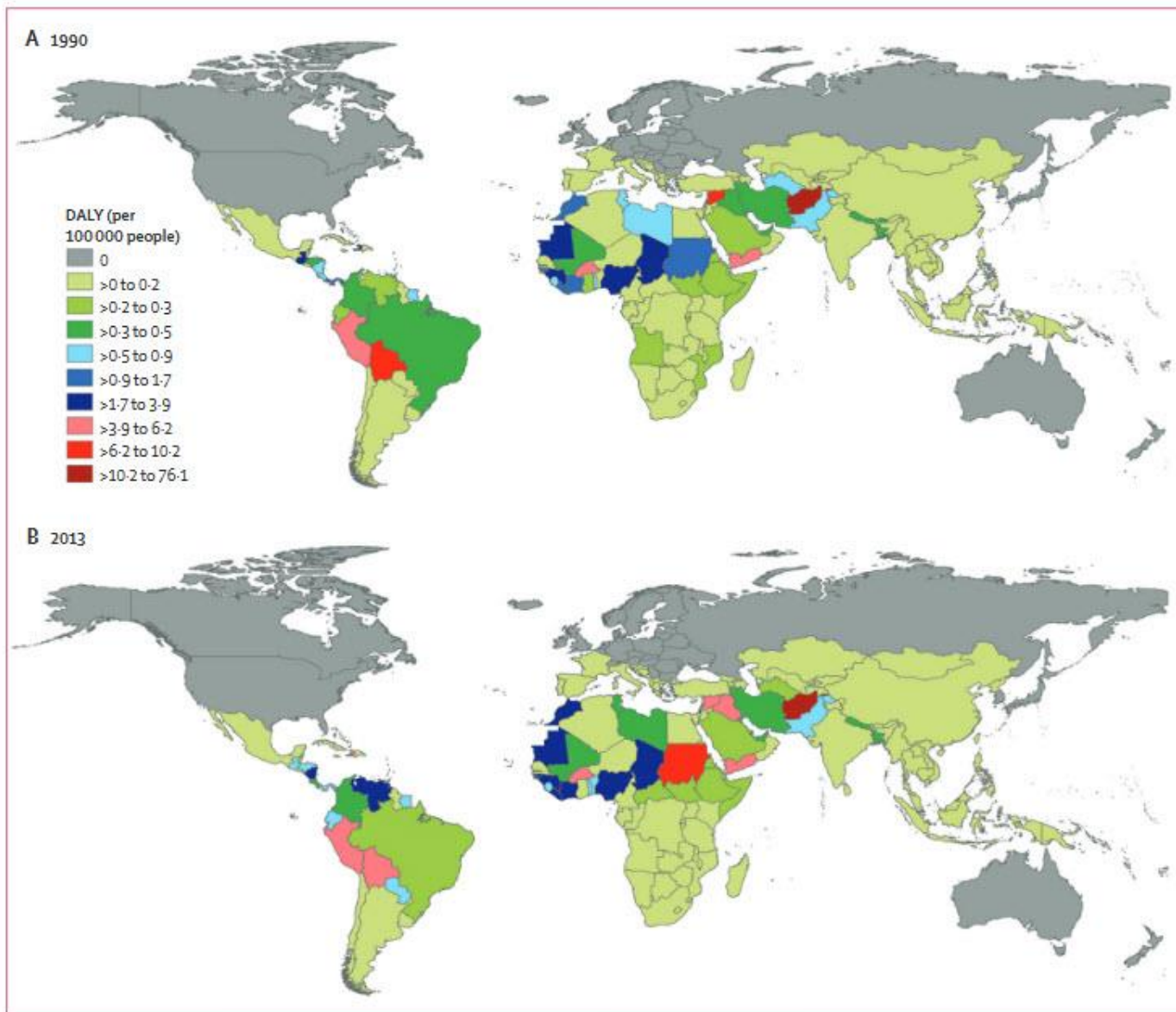


Figure 1: Global cutaneous leishmaniasis age-standardised DALYs in 1990 (A) and 2013 (B)
 DALY=disability-adjusted life-year.

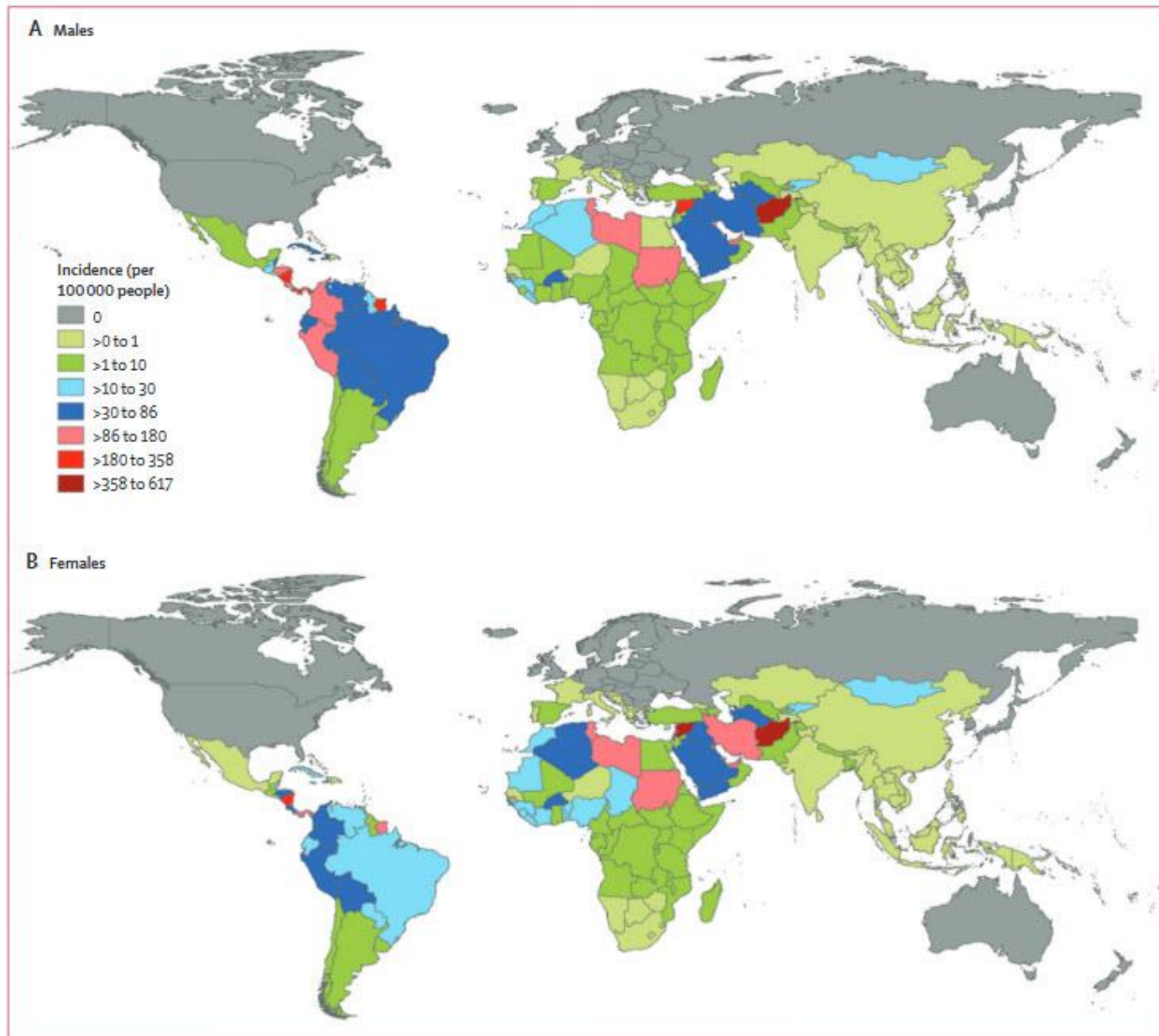


Figure 3: Global 2013 cutaneous leishmaniasis all age incidence rates in males (A) and females (B)

What Can We Do Together?

- Joint research projects (vaccinology, immunology, pathology, parasitology,.....).
- Joint multi-centered and well-harmonized clinical trials in order to find a safe, cheap and well-tolerated drug for CL.
- Help set-up a simple but efficient registry for CL to be used worldwide.
- Help raise funds in order to purchase and distribute medication and equipment (cryotherapy and thermotherapy units, antimonials, Ambisome,...) needed to treat CL patients living in endemic areas with poor resources.

*Of One Essence is the Human Race,
Thusly has Creation put the Base.
One Limb impacted is sufficient,
For all Others to feel the Mace.
The Unconcern'd with Others' Plight,
Are but Brutes with Human Face.*

*The Great Persian Poet
Saadi Shirazi (1210-1292)*

