

The image features four decorative geometric patterns in the corners, each consisting of overlapping lines in yellow, red, and teal, forming star-like or floral shapes. The central text is written in a highly stylized, colorful Arabic calligraphic font. The colors used include black, brown, orange, yellow, red, and pink. The text is arranged in a single line, reading from right to left.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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Bismillah al rahman al rahim

# **Clinical Scenario**

**A 62-year-old male presented with a 06-month history of chronic non-healing ulcer over right lower leg, extensor of left elbow, over dorsal aspect of left wrist and right hand. He had past history of travel to Baluchistan and outdoor activities.**



# Examination

- General Physical exam : Unremarkable.
- Systemic exam : Unremarkable.

# Lab Investigations

- All the base line investigations were normal.
- **What are the differential diagnosis?**

# Slit Skin Smear

- LD Bodies +

# **Cutaneous Leishmaniasis**

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# Outline

- Introduction
- Epidemiology
- Life Cycle of Leishmania
- Clinical Features
- Histopathology
- Investigations & Management



# Introduction

- A protozoal disease transmitted by bite of sand fly mosquitoes.
- Clinical manifestation ranges from aggressive cutaneous ulcers to systemic multi organ disease.



# Epidemiology

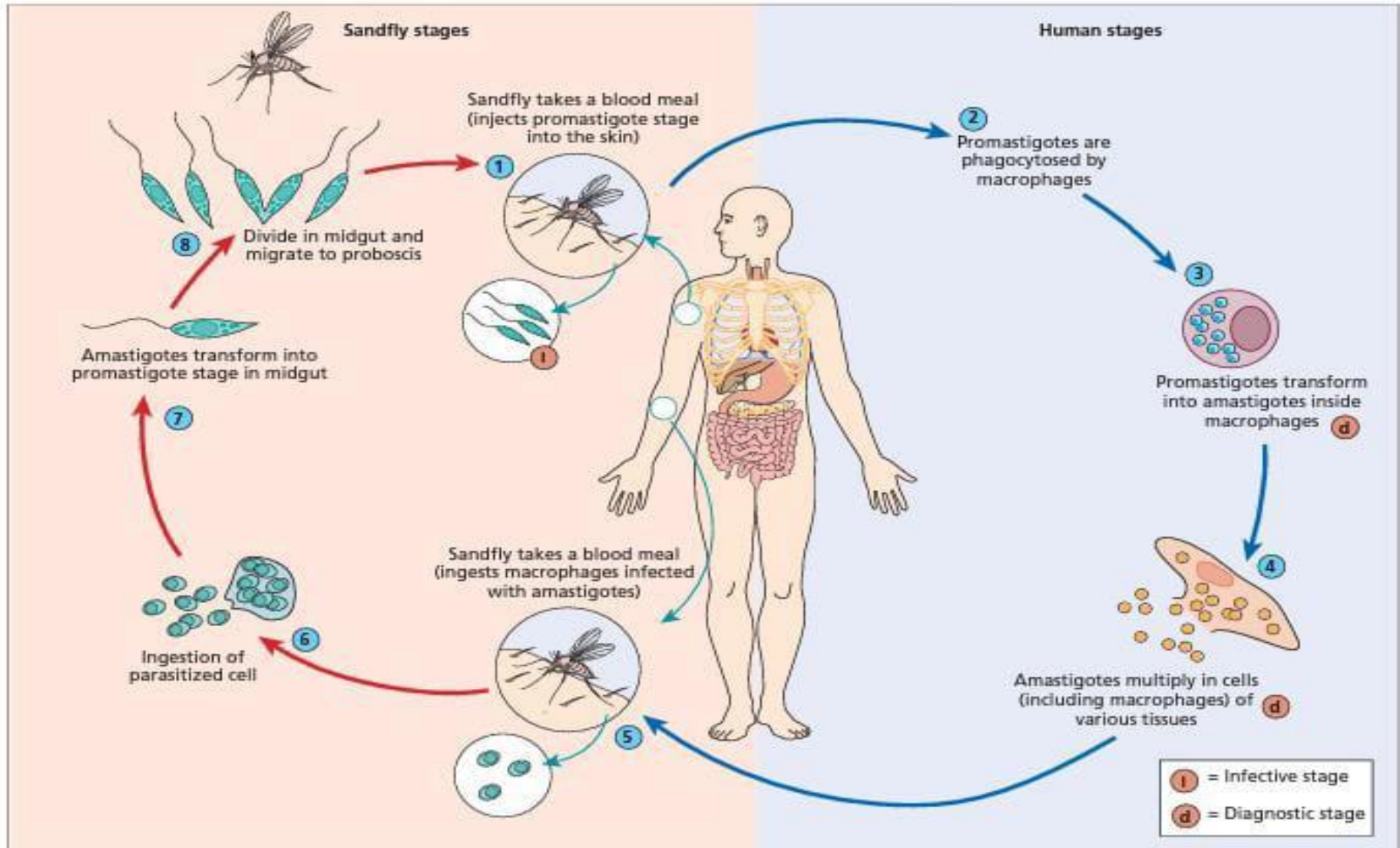
## Organisms of Old World

- L. major (common in Pakistan)
- L. aethiopica
- L. tropica
- L. Donovanii infantum

## Organisms of New World

- L. mexicana
- L. brasiliensis
- L. chagasi

# Life Cycle of Leishmania



# Clinical Features of L. Major

- Nodule > Ulceration > Crusting > Heal with Scar Formation



# Clinical Features of *L. Aethiopica*



# Clinical Features of L. Recidivans

- Chronic (Do not heal spontaneously)



# Diffuse Cutaneous leishmaniasis



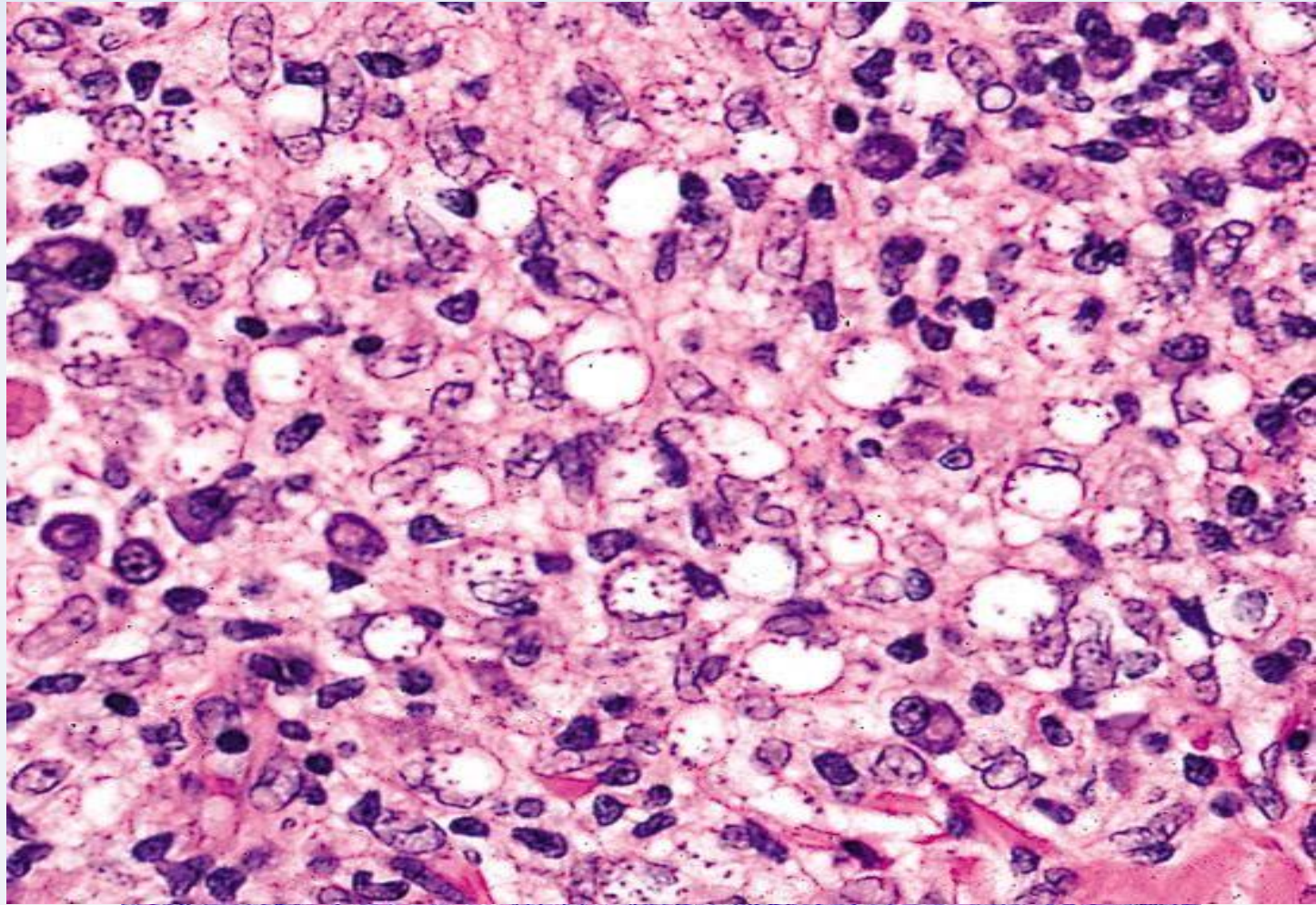
case 1. Indurated erythematous plaques on the face



# **New world Leishmaniasis**

- L. Mexicana complex
- L. Brasiliensis complex

# Histopathology



# Investigations

- **BLIs**
- **Stainings**
  - Romanovsky
  - Giemsa
  - Leishman
  - Wright
- **H&E Histology**
- **Growth of Pro-mastigotes in culture medium ( NNN )**
- **Demonstration of leishmanial DNA by PCR**

# Management

## A) LOCAL

- Heating with 40-42 C
- Cryotherapy
- Cautery
- IL antimony

## B) SYSTEMIC

- Sodium stibogluconate OR Meglumine antimoniate
- Miltefosine

# Indications for Systemic Antimonials

- Ulcer that will not heal easily especially over joints or lower limb.
- Ulcer that will causes cosmetic disfigurement.
- Involvement of mucosa and cartilage.
- Ulcer due to parasite of *L. Brasiliense*.

# **Meglumine Antimoniate**

- Anti-parasitic medicine.
- Recommended for treatment of cutaneous or visceral leishmaniasis.

## **Contra-indications**

- Allergy to leishmanicidal agents.
- Liver, Heart and Kidney diseases.
- Asthma.

## **Possible Side Effects**

### **1) Very Common**

- Headache
- Myalgias
- Arthralgias

### **2) Common**

- Abdominal Pain
- Loss of appetite
- Transient Fever
- Nausea and vomiting
- Changes in ECG ( QT interval prolongation )

# Ingredients

- **Active substance**

Meglumine antimoniate.....1500 mg per 5 ml  
(Equivalent to 405 mg of antimony per 5 ml)

- **Other ingredients**

Potassium disulfite, anhydrous sodium disulfite



# Dose Calculation

1500 mg meglumine in 5 ml

405 mg active antimony in 5 ml

So,

In 1 ml =  $405/5 = 81$  mg per ml

## Formula for Dose Calculation

Weight x Dose / 81

# **Take Home Message**

Any Patient with a non healing ulcer specially on exposed sites from endemic areas should be investigated for Cutaneous Leishmaniases.

**Questions**



Thank  
you