Infectious Diseases(3)

- **Rabies**
- **Leishmaniasis**

Rabies

- Introduction and epidemiology
- Etiology:-
- caused by a virus found in the saliva of an infected and usually spread by bite the animal can be carrier and not be ill with the disease .
- Incubation period:-10-50 days in bite of upper part of the body ,4 mouths in bite of the lower part s.
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- Negri bodies (round objects) found in the brain tissue of infected animals . virus spreads from the soft tissue surrounding the wound to the peripheral nerves and effect nervous system my cause hemorrhage and neuron destruction .

Clinical findings :-

- Anxiety ,depression ,malaise ,irritability ,headache ,stiff neck ,anorexia ,nausea ,photophobia ,respiratory difficulty ,such as wheezing ,hyperventilation and dyspnea , thirst ,paresthsia ,pain near bite ,severe dysphagia ,excessive salivation ,cardiac dysrhythmia ,paralysis ,coma and aerophobia .

Therapeutic intervention:-

- -cleansing of the wound with soap and water and apply an antibiotic ointment and a bandage .
- Watch the wound for signs of infection and agitation.
- Palpating both sides of your neck below the jaw, you should feel the carotid artery near the trachea.
- -Tracheostomy if severe respiratory embarrassment develops .

Therapeutic intervention:-

- Human rabies immune globulin for passive immunity ,dose given in the buttock ,wound is bathed with the drug .
- Human diploid cell vaccine is used to induce active immunity; duck embryo rabies vaccine (DRV)was formerly used requiring a total of 23 doses administered subcutaneously ,-
- treatment consists of five doses over 4 weeks followed by 6 doses after 2 months, Sedative or anesthetics as necessary phenytoin used for seizures.

Nursing care of client with rabies:-

- Maintain standard precaution to:-

- -avoid contact with saliva of infected client .
- -monitor blood gases ,fluid, electrolytes balance and electro cardiograms (ECG) .
- -Keep the room dark and quiet to prevent agitation,
- monitor the Tracheostomy and need for suction .
- - prevent drafts which may result in spasms.
- -allow the family and client to verbalize .

Leishmaniasis

- Introduction and epidemiology
- zoonotic Chronic inflammatory disease of skin, mucus membrane or viscera caused by obligate intracellular flagellate protozoan parasites.
- the forms of protozoa of Leishmaniasis is flagellate promostigote
- Route of transmission through bite of sand fly.
- Incubation period:-1-2mounth but maybe up to10 year.
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Sand Fly

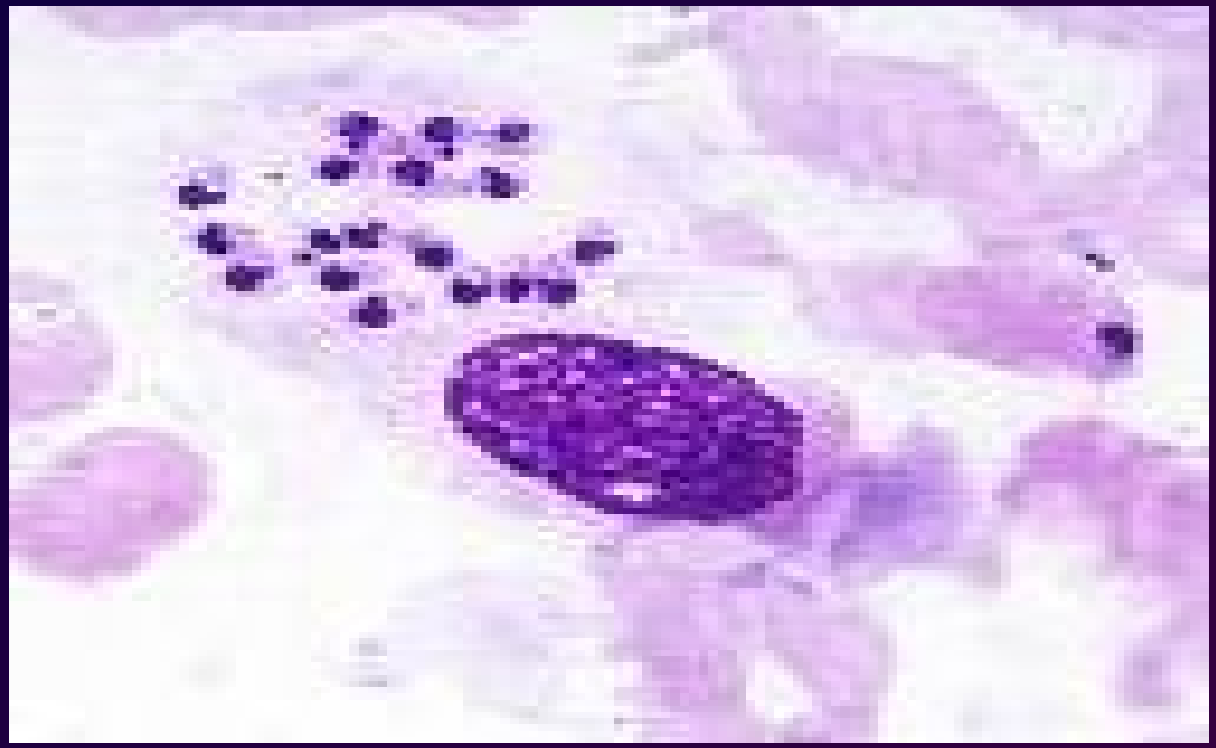


Types of leishmania:-

L .Donovan: protozoa leishmania forms known as -1
a mastigote (human/mammals): small, round to
. oval, single nucleus

- . **Promastigotes** (sand fly,culture): longer and thinner than the amastigote form. Promastigotes contain a central nucleus and an anterior flagellum

Amastigotes



Promastigotes

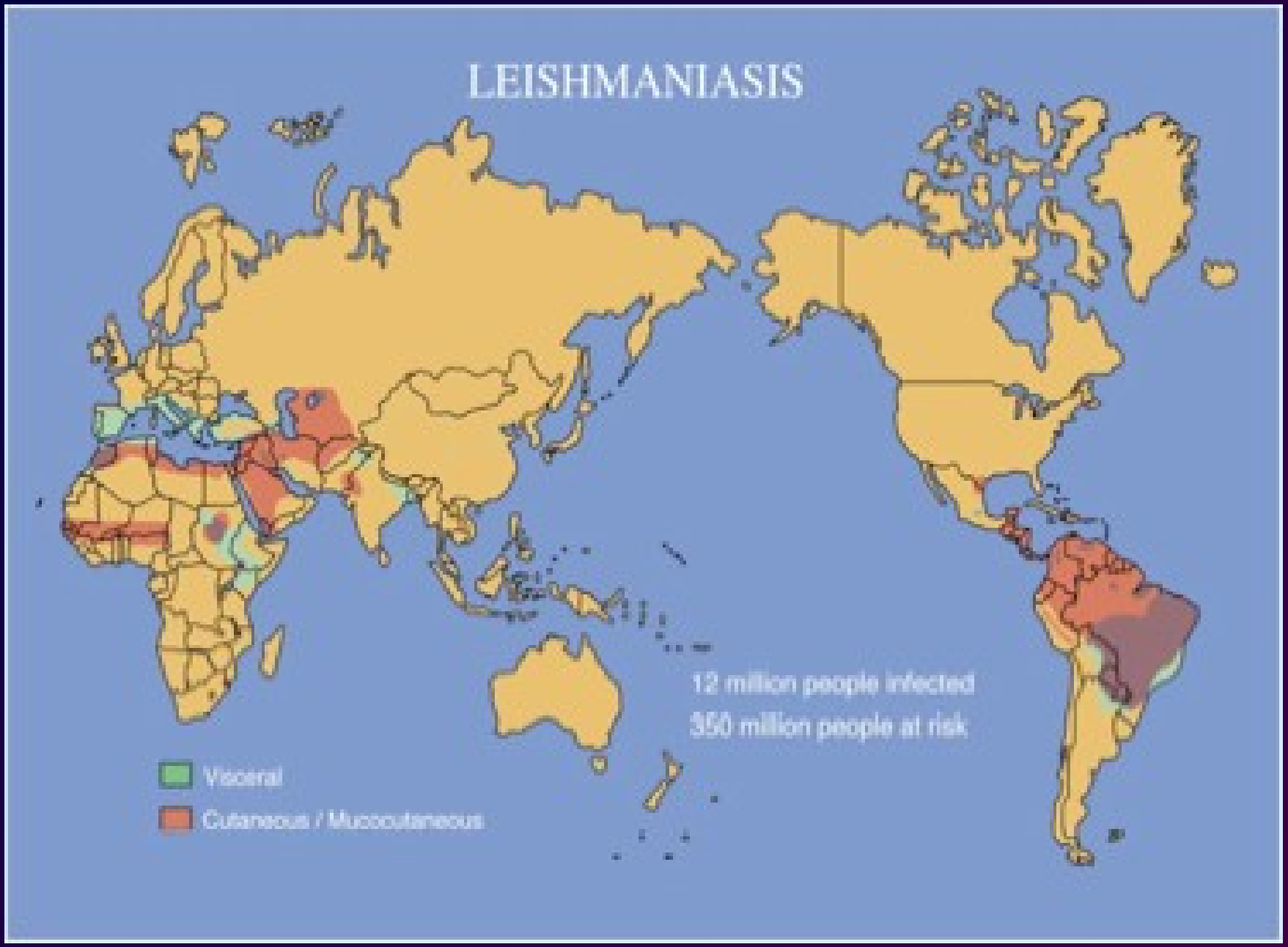


Types Of Leismaniasis

- Visceral L (kala-azar)it is cause by L-donovni in the Sudan and parts of east Africa where the disease is epidemic
- a man appears to be the chief host .in most other areas including the Mediterranean dog and foxes are the main reservoirs of infection endemic the disease occur in children

Types Of Leismaniasis

- Visceral Leishmaniasis (Bangladesh, Brazil, India, Nepal and Sudan)
- Coetaneous Leishmaniasis (Afghanistan, Brazil, Iran, Peru, Saudi Arabia and Syria)
- Diffuse Coetaneous Leishmaniasis
- Mucocutaneous Leishmaniasis (Bolivia, Brazil and Peru. (In dermatology)
- Post kala azar dermal leishmaniasis-PKDL (Endemic to India and the Sudan)


LEISHMANIASIS
12 million people infected
350 million people at risk
Visceral
Cutaneous / Mucocutaneous

In Sudan Leishmaniasis is endemic in several parts

- It is endemic in gadarif , sinar , upper nile , blue nile .North darfor and South kordofan .
- The main endemic area is in the eastern part of country and stretches from western bank of white nile to Sudanese Ethiopian border in the east and in the north from upper reaches Atbara River to an area around malakal and sobat river in the south

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- The disease has presentedun expected in immune suppressed patient e.g. renal transplantation +HIV
- The protozoa effect reticuloendothelial system or tissue (spleen, liver, lyphonode(moncyte and macrophage) and bone marrow)

Clinical feature:-

- Low grade fever –sweating and high grade fever develop rise temperature in 24hrs sometimes shavring. Spleen enlarged –massively hepatomegaly pt if not treated can develop bleeding tendency , Epistaxis . Cough - Diarrhea
- Nausea & vomiting - Weakness & fatigue
- loss of weight with good appetite ,
- lympho node adenophathy , thrombocytopenia and leucopenia .

Splenomegaly and Hepatomegaly

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Splenomegaly and Hepatomegaly





Diagnosis:-

.Bone marrow aspiration -1

Biopsy from lymph node ,spleen and liver – 2
.for culture(anti bodies)

. leishmania skin test is +ve – 3

The treatment:-anti monial

Diagnosis

- **Others:**
- Complete blood count. Bone marrow infiltration may cause anemia, thrombocytopenia, and leukopenia with a relative monocytosis and lymphocytosis.
- Liver function tests (LFTs).

Complication of VL :

1-secondary bacterial infection eg : pneumonia .

2-hepatic failure.

3-haemorrhage .

4-renal failure .

5- Post Kala-Azar Dermal Leishmaniasis

Post Kala-Azar Dermal Leishmaniasis



- Sequel of visceral leishmaniasis which may manifest years after successful treatment and resolution of Kala Azar.
- Dermal lesions may contain parasites in great numbers

PKDL



- the skin lesions vary from hyperpigmented macules to frank nodules.
- they are found on the face, trunk, extremities, oral mucous membranes, and occasionally, on the genitals

Management

- Sodium stibogluconate (**Pentostam**) is drug of choice
- Dose mg\kg \day – IV
- S\E; arrhythmia – anemia – renal failure
- RFT- ECG – HB done before **Pentostam**
- – Rare case blood transfusion rare

Management

- **nursing intervention :**
- Cheek VS - Wt daily- physical examination
- Check obtain results of this investigation RFT- LFT- ECG – HB done before give **Pentostam**
- measure abdomen girth or circumference
- Cheek signs of anemia ,jaundice and infection .

Prevention

- **Suppress the reservoir**: dogs, rats, other small mammals and rodents
- **Suppress the vector**: Sand fly
  - Critical to preventing disease in stationary troop populations
- **Prevent sand fly bites**: Personal Protective Measures
  - Most important at night
  - Permethrin treated uniforms
  - Permethrin treated bed nets

✂ **vaccine**

Nursing Processes

- Nursing Assessment
- Assess client general condition VS –body weight , nutrition &skin and mucous for signs of pallor and jaundice
- Assess client knowledge regarding disease
- Assess for complication

Nursing Diagnosis:

- Imbalanced nutrition related to increase metabolic process.
- Planning and Goals
- Maintains adequate nutritional status
-

Nursing Interventions

* Improving Nutritional Status :-

- Assess patient weight , dietary ,intake .
- Encourage rest before meals ,
- Educate patient about ways to supplement nutritional value of meals .

Nursing Diagnosis:

- Anxiety related to the presence of infection
- Goal \ Expected Outcomes Patient comfort and return to normal condition
- Nursing Interventions
- Reassure Patient
- Explain to Patient about leishmainasis briefly and his co-Patient ,

Nursing Diagnosis:

- Deficient knowledge about the infection , complication and the risk of transmission
- Goal \ Expected Outcomes
- Increased knowledge about the disease ,risk of transmission, and absence of complications

Nursing Interventions

- Increasing Knowledge regarding
- diet , treatment regimen and Preventing Spread of Infection and complications


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THANKS FOR LISTENING