Leishmaniasis: Cutaneous and Visceral types and their Treatment

Leishmaniasis is a disease caused by parasites of the Leishmania type. It is spread by the bite of certain types of sandflies. The disease can present in three main ways: cutaneous, mucocutaneous, or visceral leishmaniasis.

Transmission

Leishmania parasites are transmitted through the bites of infected female phlebotomine sandflies, which feed on blood to produce eggs.

The epidemiology of leishmaniasis depends on the characteristics of the parasite and sandfly species, the local ecological characteristics of the transmission sites, current and past exposure of the human population to the parasite, and human behavior.

Some 70 animal species, including humans, have been found as natural reservoir hosts of *Leishmania* parasites.

Visceral Leishmaniasis

Visceral leishmaniasis (kala-azar) is caused by Leishmania donovani. It is transmitted by a sandfly, which has an animal reservoir in domestic dogs and other canines.

Signs and symptoms

Presents with massive enlargement of spleen and liver, as well as wasting despite a good appetite.

It occurs as an opportunistic infection in the immunocompromised.

Diagnosis

In visceral leishmaniasis, diagnosis is made by combining clinical signs with parasitological, or serological tests (such as rapid diagnostic tests).

In cutaneous and mucocutaneous leishmaniasis serological tests have limited value and clinical manifestation with parasitological tests confirms the diagnosis.

Management

Sodium stibogluconate(pentostam) 20mg/kg/day for 28 days OR
Liposomal amphotericin B 3mg/kg daily on days 1–5, 14–18, and 21–25; aminosidine IM OD for 3 to 4 weeks

Cutaneous leishmaniasis

This disease is caused by Leishmania Tropica.

Signs and symptoms

It presents as ulcers or skin lesions that may be confused with a fungal disease or even neoplasm.

Treatment

The drug used is Sodium stibogluconate (Pentostam)

Prevention and control

Prevention and control of leishmaniasis require a combination of intervention strategies because transmission occurs in a complex biological system involving the human or animal reservoir host, parasite and sandfly vector.

Key strategies for prevention are:

Early diagnosis and effective prompt treatment reduces the prevalence of the disease and prevents disabilities and death. It helps to reduce transmission and to monitor the spread and burden of disease. Currently, there are highly effective and safe anti-leishmanial medicines particularly for visceral leishmaniasis, although they can be difficult to use.

Vector control helps to reduce or interrupt transmission of disease by decreasing the number of sandflies. Control methods include insecticide spray, use of insecticide-treated nets, environmental management and personal protection.

Effective disease surveillance is important to promptly monitor and take action during epidemics and situations with high case fatality rates under treatment.

Control of animal reservoir hosts is complex and should be tailored to the local situation.

Social mobilization and strengthening partnerships – mobilization and education of the community with effective behavioral change interventions must always be locally adapted.