**Kala-azar**

***Leishmania donovani*,** which causes kala-azar, spreads from the site of inoculation to multiply in reticuloendothelial cells, especially macrophages in spleen, liver, lymph nodes and bone marrow. This is accomplished by marked hyperplasia of the spleen. Progressive emaciation is accompanied by growing weakness. There is irregular fever, sometimes hectic. Untreated cases with symptoms of kala-azar usually are fatal. Some forms, especially in India, develop a postcure florid cutaneous resurgence, with abundant parasites in cutaneous vesicles, 1-2 years later (post –kala-azar dermal leishmanoid).

***L. tropica, L major, L mexicana, L braziliensis*** and other dermotrophic forms induce a dermal lesion at the site of inoculation by the sandfly: cutaneous leishmaniasis, oriental sore, Delhi boil etc.

Mucous membranes are rarely involved. The dermal layers are first affected, with cellular infiltration and proliferation of amastigotes intracellularly and spreading extracellularly, until the infection penetrates the epidermis and causes ulceration. Satellite lesions may be found (hypersensitivity or recidivans type of cutaneous leishmaniasis) that contain few or no parasites, do not readily respond to treatment and induce a strongly granulomatous scarring reactions.

Kala-azar, caused by *L. donovani*, is found focally in most tropical and subtropical countries. Its local distribution is related to the prevalence of specific sandfly vectors. In the Mediterranean littoral and in middle Asia and South America, domestic and wild canids are reservoirs, and in the Sudan, various wild carnivores and rodents are reservoirs of endemic kala-azar. No animal reservoirs are found for the forms from India and Kenya. Control is aimed at destroying breeding places and dogs, where appropriate, and protecting people from sandfly bites. Oriental sore occurs mostly in Mediterranean region, North Africa and the Middle and Near East. The “wet’’ type caused by *L. major,* is rural, and burrowing rodents are the main reservoir; the “dry” type, caused by *L. braziliensis,* there are a number of wild but apparently no domestic animals reservoirs. Sandfly vectors are involved in all forms.

**Treatment**

Single lesions may be cleaned, curetted, treated with antibiotics if secondarily infected and then covered and left to heal. For larger or nonhealing forms, pentavalent antimony sodium gluconate (Pentostam, Solustibosan) is a drug of choice. Pentamidine isethionate (Lomidine), followed by a course of antimony, or recombinant human gamma interferon plus antimony, may be useful for kala-azar resistant to antimony sodium gluconate.

**Immunity**

Recovery from cutaneous leishmaniasis confers a solid and permanent immunity, although it usually is species-specific and may be strain-specific as well. Natural resistance varies greatly among individuals and with age and sex. Vaccination with a living inoculum from a recently isolated culture significantly reduces the incidence of oriental sore.

 Immunity to kala-azar may develop but varies with the time of treatment and condition of the patient.

Reference.

1. Jawetz, Medical Microbiology, twenty-third edition, International Edition