LEISHMANIA & HIV
IN GRIDLOCK

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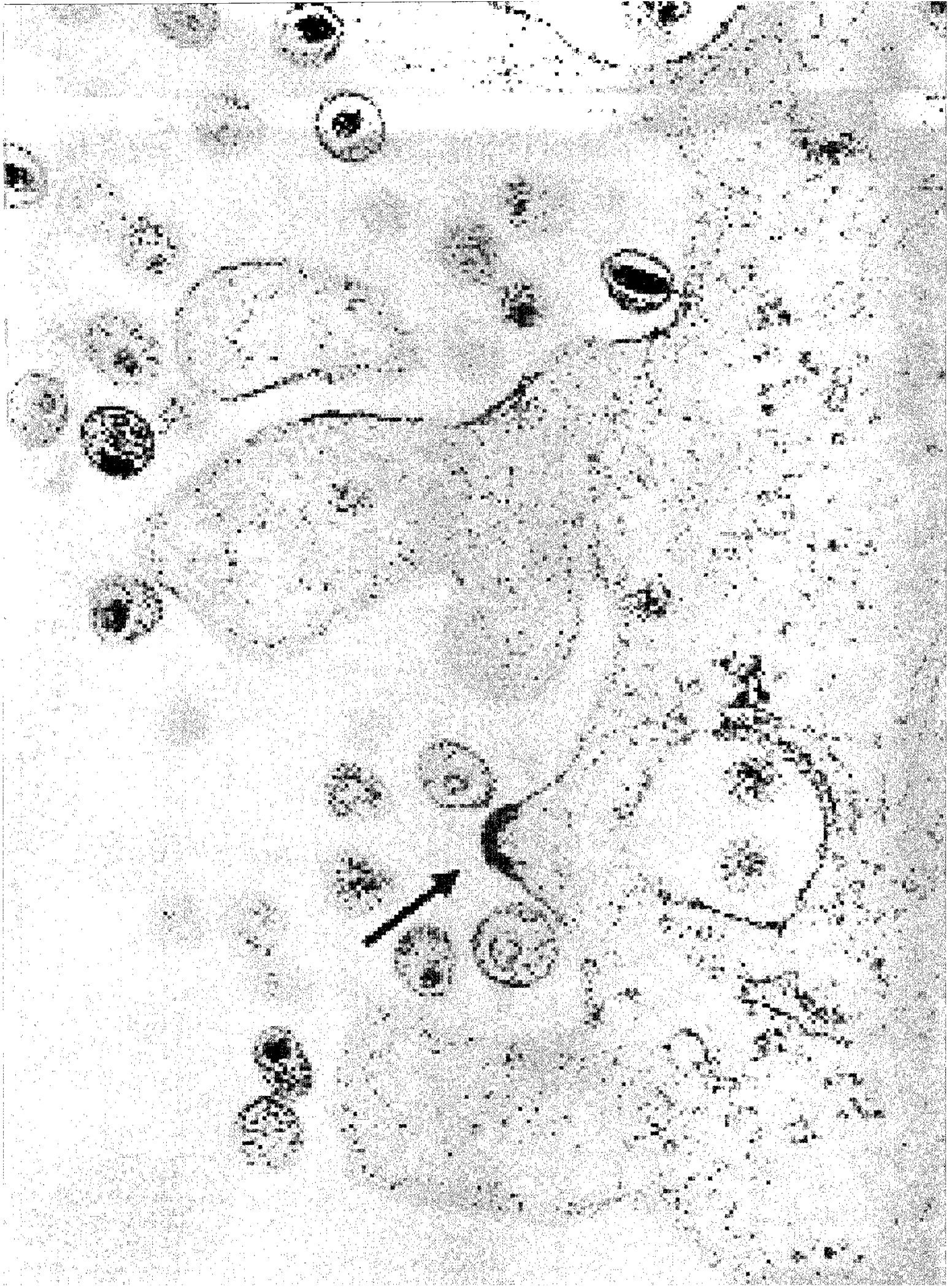

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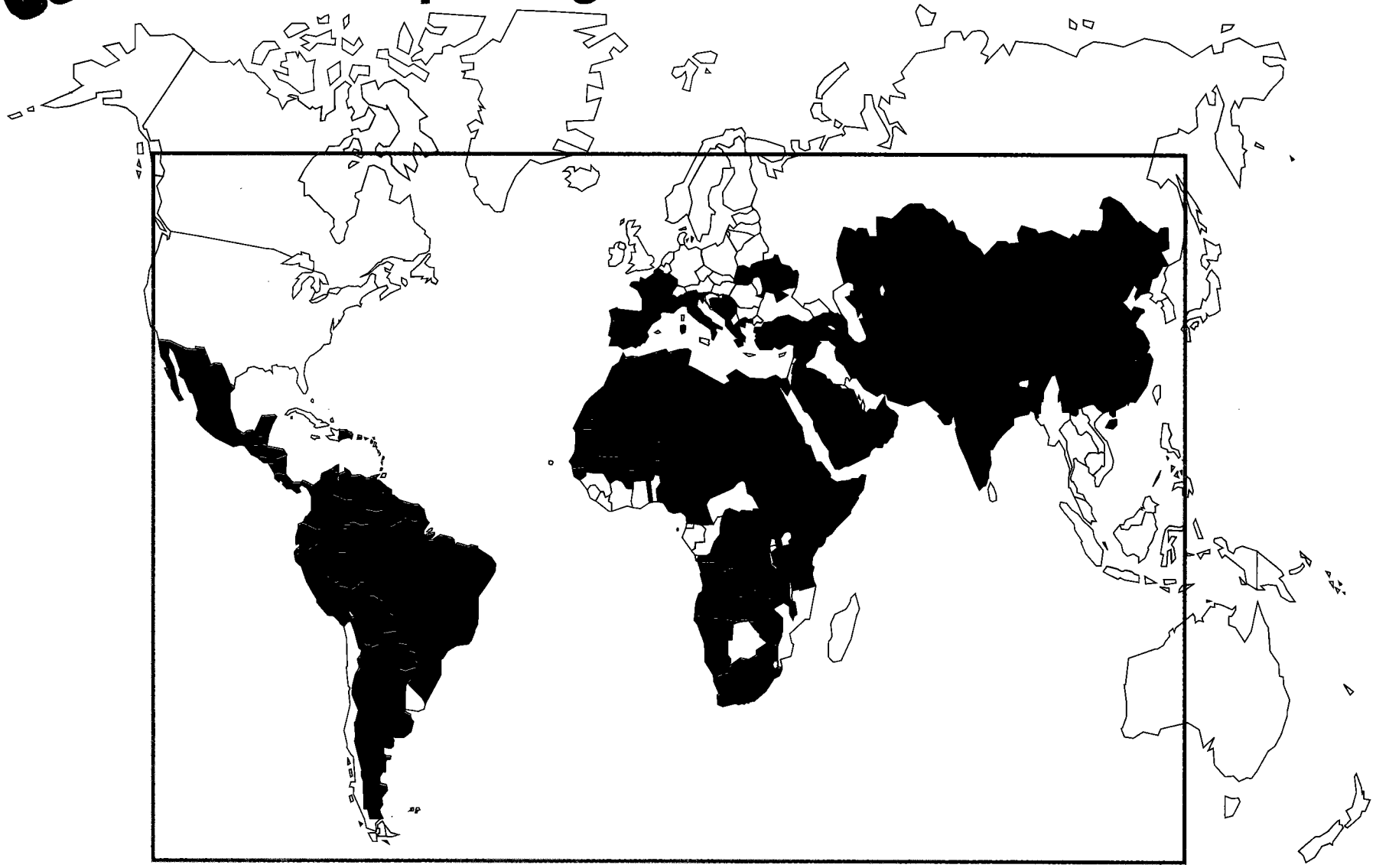
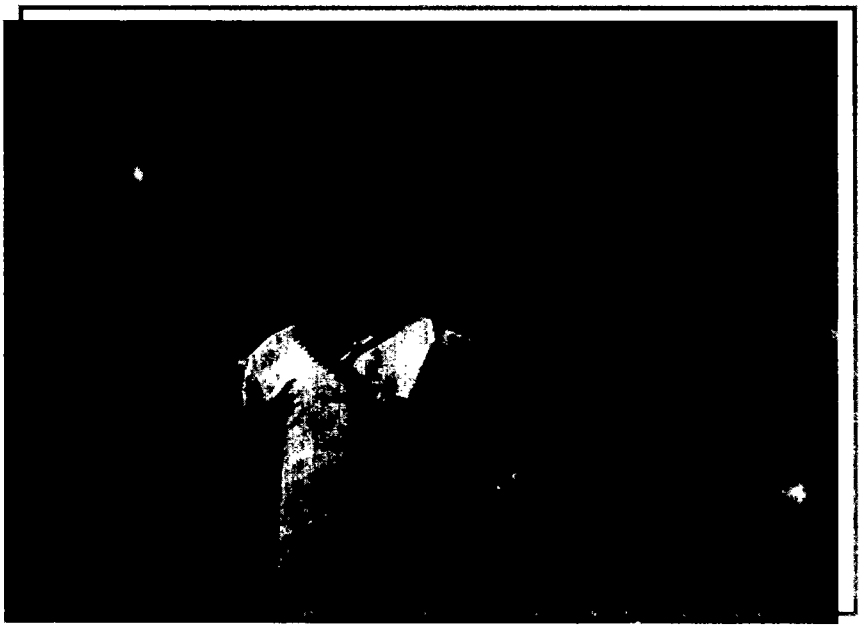
88 Countries Reporting Leishmaniasis in the World



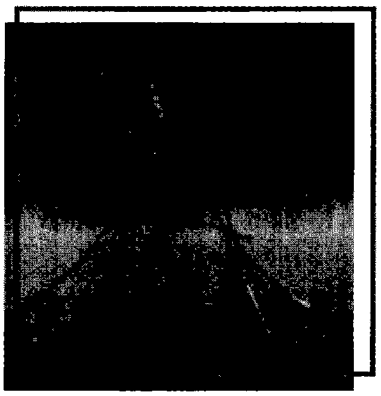
Cases have been reported in certain areas of each country.

LEISHMANIASIS IN THE WORLD



For many years, leishmaniasis has been grossly underestimated. Since 1993, it has become apparent that the disease is much more prevalent than previously suspected, with the risk that it will even increase in the future. There is evidence in many countries that urbanization, agricultural development, deforestation, irrigation and more recently HIV, contribute to increased transmission and spread of this disease. There is evidence too that infection with the HIV virus increases the risk of getting leishmaniasis, makes the disease worse and reawakens a latent infection. The converse also occurs with leishmaniasis patients becoming more susceptible to HIV infection. The interaction between the visceral form of leishmaniasis and HIV is rapidly deadly.

Leishmaniasis is found in five continents and is endemic in the tropical and subtropical regions of 88 countries. The geographical distribution of leishmaniasis is limited by the distribution of the sandfly, the carrier of the disease, its susceptibility to cold climates, its tendency to take blood from humans or animals only, and its capacity to support the internal development of specific species of *Leishmania*. There are an estimated 12 million cases worldwide. Two million new cases occur each year and 350 million people are at risk.

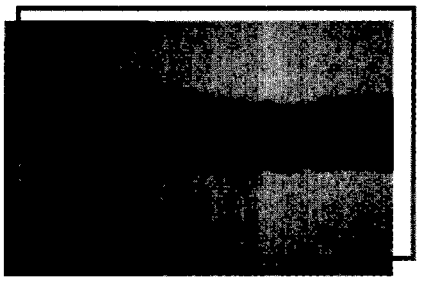


Its Transmission

Leishmaniasis is a parasitic infection transmitted naturally by the bite of an infected female sandfly. There are about 30 species of sandflies in the genera *Phlebotomus* and *Lutzomyia*, which can transmit at least 20 different species of *Leishmania* parasites. The sandfly becomes infected when taking blood from a reservoir host, which may be a human or an animal such as a dog or rodent. This disease can also be transmitted directly from person to person through the sharing of needles, as is often the case among injecting drug users in HIV co-infections.

Its Clinical Forms

The disease can present itself in man in four different forms, all with devastating consequences: *cutaneous*, *diffuse cutaneous*, *mucocutaneous*, and *visceral*. **The cutaneous forms are the most common** (1.0 to 1.5 million cases per year), representing 50 to 75 percent of all new cases. **Visceral leishmaniasis** (500,000 cases per year), **is the most fatal if untreated, particularly in cases of co-infection with other diseases, such as AIDS.**



The cutaneous forms

Cutaneous leishmaniasis is known as "little sister" in countries where the disease is so common that it is part of the family. It produces skin lesions, sometimes as many as 200 on the face, arms and legs, causing serious disability and permanent scars. Ninety percent of the cases occur in Afghanistan, Algeria, Brazil, Iran, Peru, Saudi Arabia and Syria.

The ***diffuse cutaneous*** form is less common, chronic in evolution and especially difficult to treat. It produces lesions resembling leprosy, which do not heal spontaneously. There is systematic relapse after treatment, due to deficiency of the immune response.

The ***mucocutaneous*** form, also called "espundia" in South America, produces disfiguring lesions to the face, destroying the mucous membranes of the nose, mouth and throat. Most cases of this type (90 percent) are found in Bolivia, Brazil and Peru.

The visceral form

Visceral leishmaniasis, also known in Asia as "black fever" or "kala azar," is the most severe and if untreated, usually fatal. It is characterized by irregular fever, substantial weight loss, swelling of the liver and spleen, and anaemia. After recovery, patients sometimes develop chronic cutaneous leishmaniasis and require long and expensive treatment. Ninety percent of visceral cases in the world are in Bangladesh, Brazil, India, Nepal and Sudan.

The visceral form is currently gaining ground, owing to epidemiological changes, such as rural to suburban migration in north-eastern Brazil, and inter-country mass population movements (refugees, returnees and seasonal workers), as in the Horn of Africa. The biggest focus in the world is in eastern India, where almost all districts of Bihar State have been experiencing a pre-epidemic situation with an estimated 200,000 new cases each year. Southern Sudan is another area of concern; with a population of less than one million, there were 100,000 deaths from 1989 to 1994. Also, since September 1997, a severe epidemic has been raging in Gedaref State, in eastern Sudan, with one treatment centre reporting an average of 700 cases per month.

Its Treatment

Accurate parasitological diagnosis is essential in leishmaniasis to determine the correct treatment, which is often difficult and of long duration. Some infections, especially simple cutaneous lesions due to *L. major,* are often self-healing and induce immunity to reinfection. Owing to the cost and possible toxicity of the available drugs, treatment of these is generally not recommended unless the lesions do not heal within 6-9 months or are facially disfiguring. There is a need for a simplified treatment regimen suitable for outpatient use. Other forms, such as visceral and mucocutaneous infections, can incapacitate, mutilate or kill. First-line treatment relies on the pentavalent antimonials sodium stibogluconate or meglumine antimoniate, which are expensive and need to be given by injection, often for several weeks. The second line drugs - amphotericin B and pentamidine, used in cases unresponsive to antimonials - need careful management to avoid serious side-effects. For visceral leishmaniasis, aminosidine, alone or in association with pentavalent antimonials, has shown good efficacy but it is still under evaluation. Amphotericin B, included in liposomes, has proven to be very efficient but its use is still limited and expensive.