

LETTER TO THE EDITOR

ANALOGIES IN MEDICINE: PICTURE FRAME AND TAPIR'S NOSE

Belo Horizonte, August 2012

Dear Sir

Picture frame and tapir's nose. The tapir (Brazilian - from Tupi language) is any of several large hoglike mammals of the genus *Tapirus*, of tropical America (South America and Central America) and the Southeast Asia - Malayan peninsula. Tapirs have a long flexible snout (proboscis), and four toes to the fore feet and three to the hind ones. They feed on plants and move about night. Due to its large size, the tapir has few natural predators in its environment. The human is believed to be the most common predator of the tapir as they have been hunted for food and even domesticated in some areas. The four species of tapirs are: the Brazilian or South American tapir, *Tapirus terrestris*, the Malayan tapir, Baird's tapir and the Mountain tapir. All four are classified as endangered or vulnerable. Their closest relatives are the other odd-toed ungulates, including horses and rhinoceroses. The South American tapir is the size of a small ass, with a brown, nearly naked skin.

The proboscis of the tapir is a highly flexible structure, able to move in all directions, allowing the animals to grab foliage that would otherwise be out of reach. The length of the proboscis varies among species; Malayan tapirs have the longest snouts and Brazilian tapirs have the shortest. The evolution of tapir proboscises, made up almost entirely of soft tissues rather than bony internal structures, gives the *Tapiridae* skull a unique form in comparison to other perissodactyls.

The American Tegumentary Leishmaniasis (ATL) is an infectious disease, caused by *Leishmania* of the gender protozoa, and the main species are *Leishmania (Viannia) braziliensis*, *Leishmania (Viannia) guyanensis* and *Leishmania (Leishmania) amazonensis*. All species of *Leishmania* are transmitted by the sting of female mosquitoes called phlebotomines, which belong to the *Lutzomyia* and *Phlebotomus* genders, and this transmission is made by inoculation of the promastigote forms in the skin of the vertebrate host. The ATL occurs in the Americas from the South of the United States up to the north of Argentina²⁻⁴.

The initial lesion appears at the site of the bite of the sandfly vector and is small, erythematous, solid and elevated, and its diameter increases gradually. Frequently it ulcerates and then is covered by a crust. The ulcerated lesion develops and reaches a diameter of three to 12 cm, with a very characteristic infiltrated/elevated border, as in a **picture frame**, that is, a frame, often ornamental, for forming a border around a picture²⁻⁴. An ulcer of such aspect is almost diagnostic in regions where ATL is found.

Months to years after healing of the primary lesion, an ulcer develops at a mucocutaneous junction, most often in the nasal septum. The reason why leishmaniasis patients develop mucosal involvement is not fully clear. Progression of the disease from cutaneous to nose lesions, appears to take place through lymphatic system and blood vessels. The nasal lesion is slowly progressive, highly destructive and disfiguring, eroding the mucosal surfaces and cartilage. Destruction of the nasal septum results in a free-hanging collapsed nose, with enlargement and flattening, resulting in the so called **tapir's nose deformity** (Port. nariz de tapir or focinho de anta)^{1,2,3}. Some hypotheses try to clarify the reason of such a preference. The most consistent hypothesis states that the *Leishmania* needs lower temperatures for its growth. Thus, since the front area of the nasal septum is more cooled due to the inspiration air current, there would be preference for the proliferation of the parasites².



Fig. 1 - Brazilian Tapir

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