academic publishers

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE (ISSN: 2692-5206)

Volume 04, Issue 10, 2024

Published Date: 24 -12-2024

CUTANEOUS LEISHMANIASIS AND ITS IMPORTANCE IN MEDICINE, PREVENTION OF ACTION

Olimjonova Guzal Olimjon qizi
Tashkent medical academy

Abstract: Cutaneous leishmaniasis, including a large class of Leishmanias, is widespread in Uzbekistan. Leishmanias are parasites belonging to the class of flagellates and differ from representatives of other classes in that they have one flagella throughout their body. Currently, skin leishmaniasis frequently disturbs the population in the regions of Uzbekistan, especially in the city of Termiz of the Surkhandarya region. Skin leishmania parasite does not cause a very dangerous disease to the human body, but it has the characteristic of forming a bad wound on the skin and leaving a strong scar.

Key words: Leishmania, skin, parasitism, scar

There are 3 main forms of leishmaniases: visceral (the most serious form because it is almost always fatal without treatment), cutaneous (the most common, usually causing skin ulcers), and mucocutaneous (affecting mouth, nose and throat).Leishmaniasis is caused by protozoan parasites which are transmitted by the bite of infected female phlebotomine sandflies.The disease affects some of the world's poorest people and is associated with malnutrition, population displacement, poor housing, a weak immune system and lack of financial resources. An estimated 700 000 to 1 million new cases occur annually. Only a small fraction of those infected by parasites causing leishmaniasis will eventually develop the disease. Leishmaniasis is caused by a protozoa parasite from over 20 Leishmania species. Over 90 sandfly species are known to transmit Leishmania parasites. There are 3 main forms of the disease:

- **Visceral leishmaniasis** (VL), also known as kala-azar, is fatal if left untreated in over 95% of cases. It is characterized by irregular bouts of fever, weight loss, enlargement of the spleen and liver, and anaemia. Most cases occur in Brazil, east Africa and India. In Uzbekistan Visceral leishmaniasis not find.
- **Cutaneous leishmaniasis** (CL) is the most common form and causes skin lesions, mainly ulcers, on exposed parts of the body. These can leave life-long scars and cause serious disability or stigma. About 95% of CL cases occur in the Americas, the Mediterranean basin, the Middle East and central Asia. It is estimated that 600 000 to 1 million new cases occur worldwide annually but only around 200 000 are reported to WHO.
- **Mucocutaneous leishmaniasis** leads to partial or total destruction of mucous membranes of the nose, mouth and throat. Over 90% of mucocutaneous leishmaniasis cases occur in Bolivia (the Plurinational State of), Brazil, Ethiopia and Peru. Leishmania parasites are transmitted through the bites of infected female phlebotomine sandflies, which feed on blood to produce eggs. Some 70 animal species, including humans, can be the source of Leishmania parasites.

Diagnosis and treatment

People suspected of suffering from visceral leishmaniasis should seek medical care immediately. 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.

The treatment of leishmaniasis depends on several factors including type of disease, concomitant pathologies, parasite species and geographic location. Leishmaniasis is a treatable and curable disease, which requires an immunocompetent system because medicines will not get rid of the parasite from the body, thus the risk of relapse if immunosuppression occurs. All patients diagnosed with visceral leishmaniasis require prompt and complete treatment. Detailed information on the treatment is available in the WHO technical report series 949, Control of leishmaniasis and the latest guidelines published on HIV-VL in east Africa and South-East Asia and the guideline for the treatment of leishmaniasis in the Americas.

Prevention and control

Preventing and controlling the spread of leishmaniasis is complex and requires many tools. key strategies include: In the conditions of Uzbekistan, as a prevention of cutaneous leishmaniasis, it is necessary to deworm the carrier of the disease the iskaptopar mosquito, and to carry out measures against it more deply in the remote regions. Stay in safe indoors areas.Be aware that sand flies are much smaller than mosquitoes, and therefore can get through smaller holes. Spray living and sleeping areas with insecticide to kill insects. If you are not sleeping in a well-screened or air-conditioned area, use a small mesh bed net and tuck it under your mattress. If possible, use an insecticide-treated bed net. Screens, curtains, sheets, and clothing can also be treated with insecticide. Clothing should be retreated after five washes.

Conclusion

Leishmania are intracellular protoan parasites of vertebrates that are transmitted by the bite of a sandfly vector. Their fascinating life cycly, cell biology, novel mechanisms of RNA processing and gene regulation are discussed. Leishmania are also an important model of intracellular parasitism and host parasite immune interactions. The leishmaniases are a diverse set of zoonotic diseases of global importance, including diseases of the skin, mucosa, and a potentially fatal systemic disease; these are discussed along with modern approaches to treatment and control.

References:

1. S. Ramakrishnan, S. Partricia, and G. Mathan, “Overview of high-risk HPV’s 16 and 18 infected cervical cancer: Pathogenesis to prevention,” Biomed. Pharmacother., vol. 70, no. C, pp. 103–110, 2015, doi: 10.1016/j.biopha.2014.12.041.
2. A. Sagan, D. Mcdaid, S. Rajan, J. Farrington, and M. Mckee, “Policy Brief Screening,” World Heal. Organ., 2020, [Online]. Available: http://www.euro.who.int/en/about-us/partners/
3. H. Ahmadzadeh Sarhangi, D. Beigifard, E. Farmani, and H. Bolhasani, “Deep learning techniques for cervical cancer diagnosis based on pathology and colposcopy images,” Informatics Med. Unlocked, vol. 47, no. March, p. 101503, 2024, doi: 10.1016/j.imu.2024.101503.