Trypanosomiasis in India

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Human trypanosomiasis is commonly known as sleeping sickness in Africa (*T. brucei*) and Chaga’s disease (*T. cruzi*) in South America. It was therefore surprising to read a report about the discovery of first human trypanosomiasis in Shivani village, Chandrapur district of Maharashtra 140 km. from Nagpur. Prashant Joshi et al reported the case in 2005.1 The patient presented as a PUO, had significant parasite count in his blood, without CNS involvement. The specialist investigation conducted, at the request of Maharashtra Public Health Department (DGHS), supported by WHO and the IRD led to the identification of *Trypanosoma evansi*. This is the first case report of human trypanosomiasis caused by *T. evansi*, which is a parasite of various animals, known to cause a disease called “Surra”. The mode of infection has not been clearly identified in the present case, but the discovery raises questions as to the evolution and adaptation of parasite and on the size of the problem in our country.

The patient was treated with suramine. Clinical, serological, and parasitological investigations after 6 months indicated complete cure of the patient. The serological survey of 1,806 persons from the village population was done with the agglutination test for *T. evansi*. 22.7% people were positive; however, no parasites were detected in the blood of 60 persons who were positive at a high serum dilution. Although the case seems to be isolated, the result of the study indicates a frequent exposure of human population to the parasite in the study area.

A further study published in NEJM,2 is interesting. Laboratory of Molecular Parasitology, Belgium and Institute of Research African Trypanosomiasis, Montpellier, France and Department of Medicine, and Government Medical College undertook the study. Since immunity to trypanosomes is known to involve apolipoprotein L-1 (APOL-1), patient’s serum was analysed. It showed no trypanolytic activity, and the finding was linked to the lack of APOL-1, which explained the patient’s infection with *T. evansi*. Incidentally there is a rare inherited disorder called Tangier disease characterised by severe deficiency of APOL-1.

It appears that as long as human infective *T. evansi* strains do not invade CNS and remain sensitive to suramine, the new form of human trypanosomiasis will probably not develop into major health problem like in Africa. Nevertheless, the situation requires thorough investigations in the field and laboratory.

References
