East African Sleeping Sickness in Chennai

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Abstract
A traveler to East Africa developed fever, an eschar on his forearm and thrombocytopenia shortly after returning home to Chennai, India. *Trypanosoma brucei rhodesiense* infection was diagnosed on examination of his peripheral smear. He made a full recovery after receiving a course of suramin.

INTRODUCTION

East African trypanosomiasis is an endemic disease in animals in parts of Kenya, Tanzania and Uganda. It is transmitted to humans by the bite of infected tsetse flies, and has been reported in American and European travelers to game parks in these countries. A literature search of the Medline/Pubmed database revealed no human cases of East African trypanosomiasis documented in India. We believe this case may be the first.

CASE REPORT

A 40 years male presented with fever, chills, nausea and jaundice for one week. He had noticed a painless black skin lesion on his right forearm, gradually increasing in size. He denied headache, other CNS symptoms or arthralgia. His past medical history was notable only for impaired glucose tolerance. There was no history of tobacco/alcohol abuse. He had returned three days earlier from a two week trip to the Serengeti and Ngorongoro game parks in Kenya and Tanzania with his family.

He did not recall any insect bites, but did not use full sleeved clothing or insect repellent on exposed skin areas.

Examination revealed stable vital signs except for fever to 102°F. Jaundice was present and he had a black, necrotic, non-tender eschar over his right forearm, about 6 cm in size (Fig. 1). The remainder of his examination was unremarkable.

Laboratory tests revealed that ALT = 420, AST = 440, alkaline phosphatase = 425, albumin = 3.3, globulin = 3.2, LDH = 434, bilirubin = 6.6 (direct = 5.1), CPK = 39. Hb = 12.4, Hct = 37, platelets = 17,000 and WBC = 4400/mm³ (N 73, L 19, E 1, M 7). Urinalysis revealed 6-8 RBCs and 3-5 WBCs/hpf. The CXR was clear and an ultrasound abdomen showed hepatosplenomegaly. Peripheral smear for MP/MF, leptospira IgM, anti HAV IgM, anti HCV, HIV 1 and 2 ELISA and HBsAg were all negative. ECG and echocardiogram were normal. Blood and urine cultures showed no growth.

CSF analysis revealed five cells/hpf (lymphocytes), protein = 50, glucose = 103.

Examination of his peripheral smear revealed the trypomastigotes of *Trypanosoma brucei* (Fig. 2).

A diagnosis of haemo-lymphatic stage East African
trypanosomiasis was made and he was treated with suramin (five doses of 1g IV on days 1, 3, 7, 14 and 21). All symptoms, laboratory abnormalities and the eschar resolved completely and the patient was doing well on follow up six months later.

**DISCUSSION**

Trypanosomiasis or sleeping sickness is caused by the bite of an infected tsetse fly (Glossina species). It comprises two stages of clinical disease, an initial hemo-lymphatic stage and a subsequent CNS stage. The East African form, caused by *T. brucei rhodesiense*, is a zoonosis of cattle and other wild ungulates and occurs in Kenya, Tanzania and Zambia. It is more rapidly progressive than the West African variety and is uniformly fatal if untreated. The hemo-lymphatic phase is characterized by a chancre at the site of inoculation, fever, pancytopenia and widespread lymphadenopathy. Diagnosis is usually by peripheral smear examination which reveals the characteristic trypomastigotes. Serology is available but is not usually needed in East African disease diagnosis as the levels of parasitemia are high. The CNS stage is characterized by the development of meningo-encephalitis, and is diagnosed by the appearance of CSF pleocytosis or the demonstration of trypomastigotes in the CSF. It is important to distinguish the two stages as prognosis is worse and treatment different. Suramin, the drug of choice for the hemo-lymphatic phase, is ineffective once the CNS is involved, for which the drug of choice is a toxic agent, melarsoprol.

There has been a recent upsurge in cases of trypanosomiasis reported among travellers to East African game parks. Our case has several important illustrative points:

- It is important to suspect the diagnosis in any febrile traveler to East African game parks.
- The presence of a chancre narrows the differential diagnosis even further to trypanosomiasis and rickettsial disease caused by either *Rickettsia africae* or *R. conori*.
- Diagnosis can be made in most cases by a simple peripheral smear examination.
- Suramin is not available in India and has to be imported. In our case we obtained a supply from the Liverpool School of Tropical Medicine in the UK.

In summary, in this era of increasing globalization and foreign travel, this case highlights the importance of documenting a travel history well and suspecting diseases endemic to the area of travel.

**REFERENCES**


**Announcement**

The office bearers of the Association of Physicians of India, Orissa State Branch, for the year 2003.

- Chairman : SP Das
- Vice Chairman : RK Dalai
- Hon. Secretary : KN Padhiary
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