

Congenital Trypanosomiasis

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Summary

The last successfully treated case of congenital trypanosomiasis in Zambia was in October 1978, with detailed analysis of immunoglobulins, illustrating the waning of blood and serum levels of IgA, IgG, and IgM during treatment, up to 99 days after treatment. Twenty-five years later, we report on a case of congenital trypanosomiasis. The disease is now rare and can be missed or dismissed as retroviral disease, particularly in adults. The main unusual symptoms were the prolonged intermittent convulsions in an otherwise well infant. Management of the disease is now more interdisciplinary, resources for laboratory support are fewer, lumbar puncture is more relevant, and antitrypanosomal drugs are more difficult to obtain. The mother died within one week of hospitalization and the infant initially responded to three doses of suramin and 3 weeks of melsopropol. Convulsions ceased during the second round of melsopropol. Unfortunately, the infant died of nosocomial infection.

Introduction

Trypanosomiasis is now rare in Zambia. The last congenital case occurred at a time when trypanosomiasis was endemic in the Luangwa Valley. From 1975 to 1984, regular records of laboratory-confirmed trypanosomiasis have been kept in the University Teaching Hospital parasitology laboratory. Six laboratory-confirmed cases, including our infant, occurred in 2003. These cases may be an indicator of a more serious re-emergence of trypanosomiasis in Zambia. It is important to investigate cases fully with an interdisciplinary team, involving the Veterinary Department, for tsetse fly control measures. Awareness needs to be raised in all disciplines in order to save lives.

Case Report

The infant

Three-month-old MD was admitted to the University Teaching Hospital, Lusaka, Zambia in May 2003 with a history of prolonged and intermittent generalized convulsions and excessive crying for a 2-month period. She also had an upper respiratory tract infection. There was no fever. There was a history of oral herb administration at home and treatment for the convulsions at the local clinic.

MD was a spontaneous vaginal delivery, born at term in Lwembe Village, Nyimba, Eastern Province

of Zambia. Her father was a game ranger and in good health. Six other siblings were well.

A wet mount of CSF showed motile flagellate organisms which on Gram and Giemsa stain showed *Trypanosoma* trypomastigotes. Urine, malaria and retroviral blood tests were normal. Haemoglobin was low, 6 g/100 ml, and of a microcytic picture. Clumping of red blood cells was noted on the blood film.

The infant was nursed in the Paediatric Intensive Care Unit and given phenobarbitone for convulsions, and empirical antibiotic for meningitis. Following laborious efforts to obtain antitrypanosomal therapy from various sources, she received three doses of suramin and 3 weeks of melsopropol thereafter. Haematinics were given for the anaemia. The infant improved remarkably after two cycles of melsopropol. However, she collapsed and died of suspected nosocomial sepsis during the third week of treatment. The family refused a post-mortem.

The mother

The mother had been unwell for 4 months, including the third trimester, with weight loss, headache, painful legs, unable to talk, convulsing, oral thrush, cough, and vomiting on first presentation to Chawama Clinic in Lusaka. A diagnosis of trypanosomiasis was made on blood slide. She was transferred to the University Teaching Hospital where she was assessed as stage 3 trypanosomiasis on the basis of lethargy, wasting, anaemia, and neck stiffness. She continued to deteriorate while antitrypanosomal drugs were being sought. She died at the end of 1 week in hospital.

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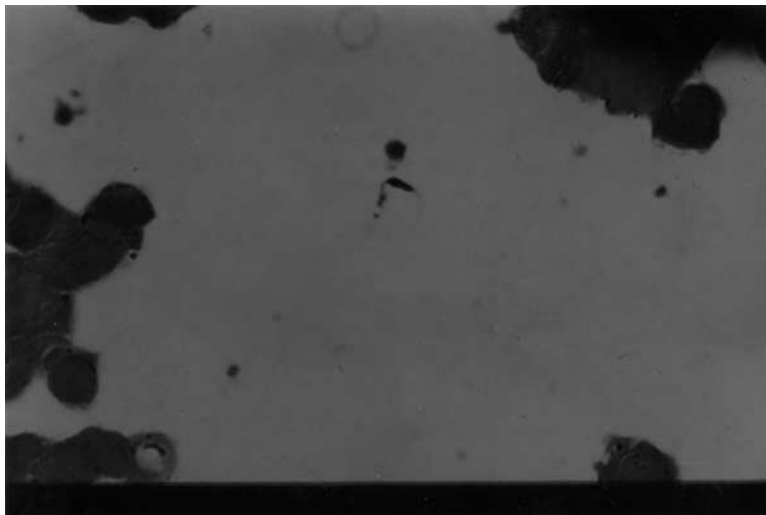


FIG. 1. Blood slide showing flagellate *Trypanosoma* trypomastigotes (in the centre) and clumped red cells at the periphery.

Discussion

The infant probably acquired trypanosomiasis congenitally, as the mother had fallen ill 1 month before delivery. Acquired trypanosomiasis cannot, however, be ruled out because of exposure to the environment. The only indication of an unusual problem was the intermittent convulsions between periods of well-being. The working diagnoses were malaria and meningitis, which are more common. The laboratory played a proactive role in making the definitive diagnosis.

Although refusal of lumbar puncture is a new and compromising trend in Zambia, our patient had a lumbar puncture. Both CSF and blood slides showed trypanosomiasis. Rouleaux formation, an indicator of high IgM levels, was noted.

The clinical diagnosis in the mother was similar to retroviral illness, particularly the combination of symptoms of chronic ill health, weight loss, anaemia, oral thrush, and features of neurological involvement. In spite of this, a definitive diagnosis of trypanosomiasis was made.

The interdisciplinary team includes obstetricians, paediatricians, physicians, laboratory services, pharmaceutical, and veterinary services. Cases of successful treatment of trypanosomiasis in pregnancy have been reported. The pharmaceutical service should be able to access antitrypanosomal drugs rapidly, knowing that the World Health Organization supplies free antitrypanosomal drugs.

Two-thirds of Zambia, in all nine provinces, is infested with tsetse fly, principally *Glossina morsitans*. Others are *G. pallidipes*, *G. brevipalpis* and *G. fuscipes*. *Trypanosoma brucei rhodesiense* is

responsible for human cases. Confirmed cases of human trypanosomiasis have been reported in Nyimba, Mpika, and Mambwe districts. Active disease surveillance is needed urgently, to provide the correct prevalence of human trypanosomiasis.

Although rare, trypanosomiasis must be considered as a differential diagnosis of malaria, meningitis, and encephalitis in young infants. Infants with intermittent or unusually prolonged episodes of afebrile convulsions with periods of well-being should be investigated for trypanosomiasis, among other causes. Lumbar puncture is a helpful procedure for diagnosing trypanosomiasis while the interdisciplinary approach adds value to the medical care.

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