African trypanosomiasis.

African trypanosomiasis, or sleeping sickness, has a profound history deeply intertwined with the resilient sub-Saharan peoples of Africa. The disease, which humans have likely been grappling with for centuries, was officially documented by Europeans in the early 20th century. The first significant outbreak, occurring between 1896 and 1906, primarily in Uganda and the Congo Basin, resulted in massive devastation, claiming tens of thousands of lives and bringing the disease to global attention.

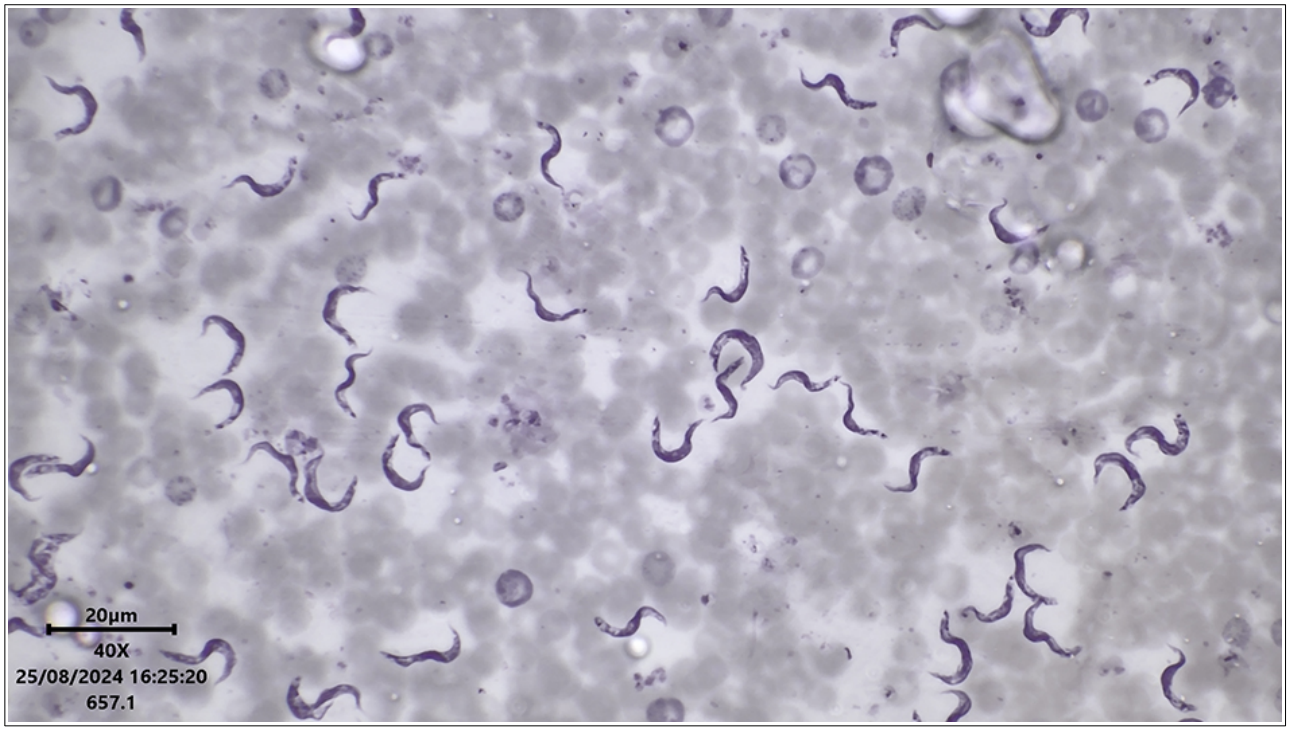

Image taken by Stephen Durr with a Zeiss Photomic' III.
Olympus S plan Apo 40X objective with N.A. 0.95 fitted with a correction collar.
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During the colonial era, European scientists and doctors played a pivotal role in seriously studying sleeping sickness. In 1901, British doctor David Bruce made a groundbreaking discovery, identifying the *Trypanosoma brucei* parasite as the cause and linking it to the tsetse fly. This discovery was a significant leap forward in understanding the disease's transmission.

Two more significant outbreaks occurred around the mid-20th century, one in the 1920s and another in the 1970s. These outbreaks led to large-scale efforts to control the disease, with governments setting up specialised treatment centres and using insecticides to reduce the tsetse fly population. Despite these efforts, the disease wasn't going anywhere and is still found where health facilities are rare or non-existent, especially in rural areas with minimal access to healthcare.

Remarkable progress has been made in the past few decades in controlling and treating sleeping sickness. Ongoing control efforts have led to a dramatic decrease in new cases over the past 20 years, a testament to the effectiveness of these initiatives. The development of new tools for diagnosis and treatments, such as orally administered Fexinidazole, has significantly enhanced disease management, offering a promising outlook for the future.

While the number of cases of sleeping sickness has declined, the disease remains a persistent public health challenge. Organizations worldwide efforts, including monitoring and controlling the tsetse

fly population and community education, are encouraging signs of progress. However, the urgency of the situation necessitates continued and intensified efforts to combat this debilitating and deadly disease.

Trypanosoma brucei rhodesiense is a protozoan parasite that causes East African sleeping sickness, a disease found primarily in eastern and southern Africa. The parasite is transmitted to humans by being bitten by an infected tsetse fly (*Glossina* species), which gets the parasite from infected animals or humans.

Trypanosoma brucei rhodesiense has a life cycle that involves a mammalian host and a vector (the Tsetse fly). If the infected Tsetse fly bites someone, it injects metacyclic trypomastigotes into the skin tissue. The parasites then enter the lymphatic system and bloodstream, changing into bloodstream trypomastigotes and multiplying by binary fission.

The disease is acute and progresses very quickly. Symptoms appear within a few weeks to months after infection, starting with fever, headaches, muscle and joint aches, and enlarged lymph nodes. As the disease progresses, it affects multiple organs, including the brain, leading to neurological symptoms such as confusion, sensory disturbances, and disruptions in the sleep cycle. Without any treatment, the disease is usually fatal. To diagnose *T. b. rhodesiense* infection, laboratories specialising in this disease tests are needed to detect parasites within the blood, lymph node aspirates, or cerebrospinal fluid. Treatment depends on the stage of the disease. Early-stage infection can be treated with drugs like Suramin or Pentamidine. In contrast, late-stage infection involving the central nervous system requires more toxic drugs such as Melarsoprol or Eflornithine. *T. b. rhodesiense* accounts for about 8% of reported HAT cases, with the majority caused by *T. b. gambiense*. The disease mainly affects rural agriculture, fishing, animal husbandry, or hunting populations, who are more exposed to tsetse flies. Control measures include reducing human-tsetse contact through insecticide-treated targets and traps and treating infected animals to reduce the reservoir of the parasite.

Trypanosoma brucei rhodesiense remains a significant public health challenge in eastern and southern Africa. Continued surveillance, vector control, and treatment are essential to manage and eventually eliminate this disease. Understanding its life cycle, clinical presentation, and epidemiology is central to developing effective strategies to combat this parasitic infection.

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