

THE EFFECTS OF TSETSE FLY ON HUMAN POPULATION

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ABSTRACT

Tsetse flies are blood-sucking insects found in sub-Saharan Africa. It carries the virus that causes sleeping sickness in humans and Nagana disease in animals. Controlling tsetse flies is important for preventing this disease. It can be controlled by control of the tsetse fly. Controlling the tsetse fly will control the African sleeping sickness disease

Introduction:

Tsetse flies are parasites of trypanosomes that cause sleeping sickness and other diseases in humans. Exclusive When a mosquito bites, it can spread the parasite, causing symptoms such as fever, headache, and eventually complications in the brain. Tsetse flies are parasites of trypanosomes, bacteria that cause sleeping sickness and other diseases in humans. Exclusive When a mosquito bites, it can spread bacteria that can cause symptoms such as fever, and headache, and eventually cause problems in the brain [1, 2].

lifecycle:

The life cycle of the tsetse fly is based upon four stages. Egg, Larvae, pupa, and adult. Female tsetse flies give birth to live larvae and the pupal stage occurs in the soil. The entire life cycle usually takes several weeks to complete; Factors such as temperature and humidity affect the duration of each stage [4].

Areas inhabited by tsetse fly:

Tsetse flies are generally found in sub-Saharan Africa, especially in areas with suitable habitats such as forests, savannas, and riverbanks. They appear to live in countries such as Zimbabwe, Zambia, Tanzania, and some parts of West Africa [3].

Diseases transmitted by tsetse fly:

Tsetse flies are vectors of trypanosomiasis and cause diseases such as African trypanosomiasis (also known as sleeping sickness in humans) and Nagana disease in animals [4].

African sleeping sickness disease:

African sleeping sickness, also known as African trypanosomiasis, is a dangerous vector disease transmitted by the tsetse fly in sub-Saharan Africa. It is caused by trypanosome parasites, specifically *Trypanosoma brucei gambiense*, and *Trypanosoma brucei rhodesiense*. Symptoms include fever, headache, and joint pain, and if left untreated in later stages, it can cause neurological problems, sleepiness, and even death. Management includes prevention of tsetse fly bites, early diagnosis, and appropriate treatment [5,7].

Signs and Symptoms:

Signs and symptoms of sleep or African trypanosomiasis can be divided into two stages. :1.

In the early stages: - Fever – Headache – Joint pain – Itching – swelling of lymph nodes2.

Diseases affecting the Central Nervous system): sleep disorders and sleep, including daytime insomnia – Behavior changes – Confusion – Poor coordination and motor skills – Tremors> - Weakness As the disease progresses, behavioral changes, mental retardation, walking and speaking difficulties may occur in people. Early diagnosis and appropriate treatment are important for a better prognosis [7].

Transmission:

Sleeping sickness, or African trypanosomiasis, is transmitted to humans through the bite of the tsetse fly. Tsetse flies are transmitted by feeding on the blood of humans or animals already infected with a trypanosome's virus, specifically *Trypanosoma brucei gambiense* or *Trypanosoma brucei Rhodesia*. This disease occurs in the fly's stomach and when the tsetse fly bites a person or animal and feeds on its blood, it spreads the disease to the nerves. Once in the bloodstream, the bacteria can spread and spread and cause sleep-related symptoms [9].

Treatment:

Treatment of African sleeping sickness or African trypanosomiasis depends on the stage of the disease and the specific diseases involved. Early stage (first stage – hemolymph stage): - The drug used for *Trypanosoma brucei gambiense* (responsible for chronic disease) is pentamidine. – Suramin is usually given for *Trypanosoma brucei rhodesia* (responsible for serious disease). 2. Advanced stage (second stage – central nervous system stage): For both types of disease, melarsoprol or eflornithine is usually used. Treatment can be difficult and depends on factors such as drug choice, the

specific organism causing the infection, and the stage of the disease. Due to their side effects and the complexity of the treatment, these drugs are often used under the supervision of a doctor [8].

Control and prevention:

Prevention focuses on controlling the tsetse fly population, preventing bites through protective clothing and insecticides, and early diagnosis and treatment to prevent disease transmission [6].

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