

CASE REPORT

Trypanosomiasis in a Cat- A Case Report

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Trypanosomiasis is an infectious protozoan disease caused by several species of *Trypanosoma*. It is described as a complex, debilitating and often-fatal disease of man, domestic and wild animals. Biting flies such as Stomoxys, Tabanus, and Triatomids bugs spread the disease, and some recent resources showed that the disease can be transmitted by ingestion of dead animals recently infected with trypanosomiasis (Nwoha, 2013). Available literature on natural feline trypanosomiasis in the world appears scanty (Tarello, 2005). Clinical signs vary depending on the severity of the disease and *Trypanosoma* spp. which include anorexia, anaemia, fever, enlarged superficial lymph nodes, conjunctivitis as well as edema of limbs (Zenad and Radhy, 2020). Corneal opacity, edema around the eyes and head that continues into the abdomen, and lacrimation are the most common manifestations in cats with trypanosomiasis (Priyowidodo *et al.*, 2016). The disease has three forms; acute, subacute, and chronic, where the acute form is highly fatal. There are several techniques used for the diagnosis of *Trypanosoma* spp. such as parasitological, immunodiagnostic and DNA amplification. Present communication reports about trypanosomiasis and its successful treatment in a cat.

CASE HISTORY AND OBSERVATIONS

A 16-month-old female cat was presented to the Department of Veterinary Clinical Complex, Veterinary College, Bidar (India) with the history of dullness, reduced feed intake, and ocular discharge since 3 days. Clinical examination revealed 102.5°F rectal temperature, pale conjunctival mucus membrane (Fig. 1), muco-purulent ocular discharge, edema around the eyes extending to head (Fig. 2) and incoordination. Approximately 2 mL blood sample was collected from cephalic vein into tube containing EDTA. Blood smear stained with Giemsa stain and examined under microscope (Oil-immersion) revealed presence of extra-erythrocytic *Trypanosoma* (Fig. 3). Haematological examination revealed anaemia and haemogram with haemoglobin 7 g/dL, packed cell

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volume 27.5%, total erythrocyte count $5.07 \times 10^6/\mu\text{L}$, total leukocyte count $7,700/\mu\text{L}$, mean corpuscular volume 54.5 fL, mean corpuscular haemoglobin 13.8 pg, mean corpuscular haemoglobin concentration 25.5%. Based on clinical symptoms and confirmation by microscopic examination the case was diagnosed as trypanosomiasis.



Fig.1: Pale mucus membrane



Fig. 2: Edema around eyes and head

TREATMENT AND DISCUSSION

The cat was treated with inj. Isometamidium chloride (Nyzom) @ 1 mg/kg BW deep IM, inj. Ringer lactate @ 5 mL/kg BW IV, inj. Tribivet @ 0.5 mL/kg BW, inj. Chlorpheniramine maleate (Zeet) @ 0.5 mg/kg BW. The cat was maintained on oral haematinics (aRBC) @ 3 mL twice daily. Blood smear examination one week post-treatment showed absence of *Trypanosoma* organisms and the cat was active and recovered uneventfully.

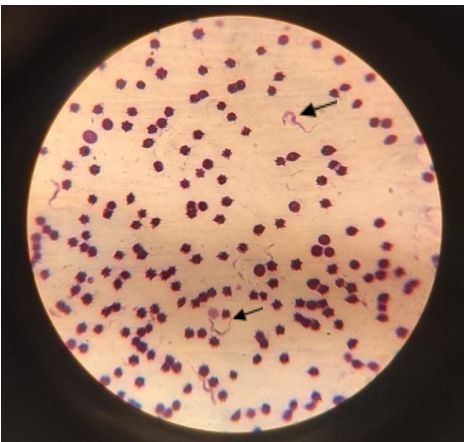


Fig 3. *Trypanosoma* spp. (arrow) on microscopic examination (1000X)

The clinical findings of dullness, anorexia, emaciation, muco-purulent ocular discharge, incoordination, pale mucous membrane, edema around eyes and head observed in infected cat with *Trypanosoma* spp. were similar to those reported by Tarello (2005), Priyowidodo *et al.* (2016)

and Mohammed *et al.* (2022). Decreased Hb, PCV, TEC indicating anaemia were also reported by Da silva *et al.* (2009), Priyowidodo *et al.* (2016), Shivajothi and Reddy, (2018), and Mohammed *et al.* (2022). The ideal way to diagnose *Trypanosoma* parasite in cats is using a thin blood smear stained with one of Romanowsky stains as Giemsa stain and examined under microscope (magnification of 1000X) (Solikhah *et al.*, 2019). The most used approach for diagnosing trypanosomiasis is blood examination by light microscopy (Shivajothi and Reddy, 2018). We could also see extra-erythrocytic *Trypanosoma* spp. in Giemsa stained blood smear. Single injection of isometamidium along with supportive treatment was found effective in the treatment of trypanosomiasis in a cat. Isometamidium chloride is used for both treatment and prophylaxis of trypanosomiasis, it inhibits DNA functions in trypanosomes by binding to kinetoplast DNA (Sandhu, 2013).

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