Plasmodium bubalis infection in a buffalo: A case report

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Abstract
A case report of Plasmodium bubalis in a crossbred murrah buffalo with a note on morphology of the parasite in described in this paper.
Keywords: Plasmodium bubalis, Buffalo, Morphology.

Introduction
The buffalo malaria caused by Plasmodium bubalis was first reported by Sheether (1919) in India followed by many workers (Edwards, 1923; Cooper, 1926; Sen, 1932; Rao, 1938; Shastry et al., 1985). Natural cases of buffalo malaria along with phosphorus deficiency (Siddique et al., 1981), decreased appetite (Kalra and Juyal, 1990) and haemoglobinuria with elevated temperature (Kolte et al., 2002) has also been reported. The present paper describes a case of buffalo malaria in a crossbred Murrah buffalo in attendance at large animal clinic, Madras Veterinary College, Chennai.

Materials and Methods
A crossbred Murrah buffalo presented at Madras Veterinary College clinic was examined. Blood film prepared from venous blood was stained by Giemsa and examined microscopically. Clinical treatment with oxytetracycline and dextrose normal saline was provided.

Results and Discussion
The blood smear collected from the buffalo on the second day of arrival to the clinics, showed trophozoites (Fig. 1) and gametocytes (Fig. 2) of P. bubalis. The trophozoites were predominantly amoeboid and signet-ring in shape measuring 1.2 to 1.8 μm. The bigger trophozoites were spherical in shape (Fig. 2) measuring 3.4 to 5.0 μm. The trophozoites had pinkish blue cytoplasm with darkly stained nucleus. The blood smear had a few gametocytes measuring 6-8 μm, which occupied the entire erythrocyte with yellowish brown rod shaped pigments (Fig 2). The

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observations on the morphology of the trophozoites and gametocytes were in accordance with Shastri et al. (2002). The blood smear showed anaemic changes like polychromasia, basophilic stippling with the differential count of 62 neutrophils, 28 lymphocytes, 5 monocytes and 5 eosinophils.

Clinical examination of the animal revealed inappetance with reduced rumen motility, pale mucous membrane, anaemia and hyperthermia (102.6°F).

The buffalo was treated with oxytetracycline and 5% dextrose normal saline at recommended dose for two days.

References


