



FIRST REPORT OF NATURALLY MICROFILARIAE INFECTED BUFFALO FROM PUNJAB (INDIA)

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Filarioid are economically important nematodes parasites of domestic animals. *Setaria* spp. is one of the filarioid nematode which produces first larval stage called as 'microfilariae'. These microfilaria when in circulation can be easily taken up by haematophagous insects which probably act as intermediate hosts and active vectors (Anderson, 2000). In their natural hosts viz., cattle and buffalo, the parasites are generally considered to be non-pathogenic, although they may cause mild fibrinous peritonitis. The sheathed microfilaria in systemic circulation migrates through different body tissues of the host and causes varied clinical manifestations. During their course of migration they may accidentally get lodged in the corneal chamber causing severe irritation to the cornea leading to corneal opacity and blindness in the affected animals. The present study describes the occurrence of microfilariosis with corneal opacity in buffalo and the consequent alteration in haematological parameters.

A seven year old nondescript buffalo was presented with clinical signs of lacrimation, conjunctivitis and corneal opacity to the Teaching Veterinary Clinical Complex, GADVASU, Ludhiana, Punjab (India). The animal was tested for the presence of haemoparasites through blood smears examination. For this purpose, peripheral blood was collected in EDTA from jugular vein under aseptic conditions. Thereafter, a drop of blood was placed on a clean grease free microscopic glass slide and smear was prepared and air-dried. The smear was stained with the Giemsa stain after fixation in methanol and examined under light microscope by using the oil immersion objective. The hematological parameters including haemoglobin (Hb), packed cell volume (PCV), total leukocyte count (TLC) and differential leukocyte count (DLC), total erythrocyte count (TEC) and platelet count was estimated using standard protocol as described by Benjamin (2007).

Microscopic examination of Giemsa stained blood smear revealed the presence of microfilaria (Fig. 1). The erratic migration of the *Setaria* spp. within the eye probably caused severe irritation to the cornea leading to corneal opacity which was a rare finding. Setarial microfilariasis in bovines has been reported from various parts of India, viz., Andhra Pradesh, Uttar Pradesh, Orissa, Madhya Pradesh and Tamilnadu. The prevalence has

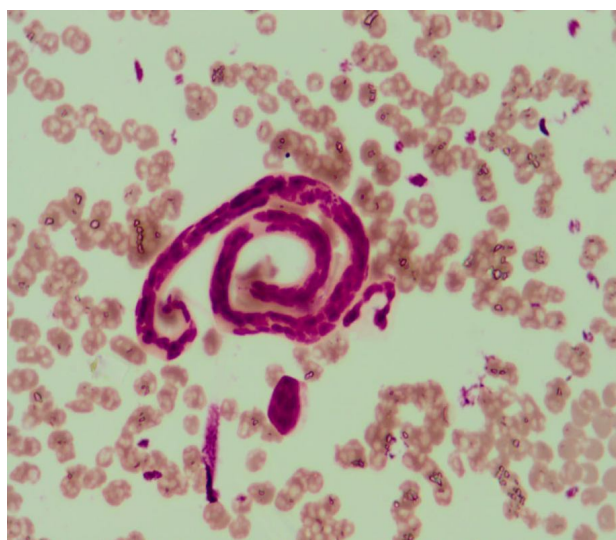


Fig . 1: Note the presence of spiral microfilaria worm in blood smear [Giemsa X 100]

been found to be extremely high in the coastal areas of Andhra Pradesh and in the hilly and forest areas of Tarai region of Kumaon hills of Uttar Pradesh (Rani *et al.*, 2009). The present report of microfilariasis in a buffalo seems to be the first of its kind from Punjab (India).

Hematological examination revealed Hb 10.3 g dL⁻¹, PCV 24.1%, DLC (neutrophils, 50%; lymphocytes, 50%), TLC 23,180 μ L⁻¹, TEC 6.05 x 10⁶ μ L⁻¹ and platelet count 283 x 10³ μ L⁻¹. The leukogram revealed marked neutrophilic leukocytosis. Hashem and Badawy (2008) reported leucocytosis with neutrophilia in dogs infected with *Dipetalonema reconditum*, whereas Paltrinieri *et al.* (1998) showed neutrophilic leukocytosis in dogs with dirofilariasis. In contrast to the present study anaemia (Hb 6 g dL⁻¹, PCV 20%) was reported in buffalo suffering from microfilariosis (Rani *et al.*, 2009).

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