

A RARE CASE OF FIBROMATOUS EPULIS IN A BUFFALO

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SUMMARY

A six years old non-descript buffalo was presented with history of growth on gingival mucosa since two months. Grossly, the growth appeared single, smooth, firm, pedunculated, gray to black in colour with single stalk attached to gums. Microscopically, it revealed eosinophilic osteoid tissue surrounded by collagen fibres and fibroblasts. At margins, engorged blood vessels with erythrocytes, haemorrhage and focal areas of necrosis with marked mononuclear cells infiltration were observed. The growth appeared to originate from periodontal region. Based on gross and histopathological examinations, the case was diagnosed as fibromatous epulis.

Key words: Buffalo, gingival mucosa, fibromatous epulis.

Gingival masses of all types, many of which are of tooth germ origin, are common in dogs, but occur less frequently in other species (Jubb and Kennedy, 1970). The term epulis is used inconsistently for localized exophytic gingival growths, both reactive and neoplastic (Gardner, 1996) and has been applied to various lesions including fibromatous epulis of periodontal ligament origin, acanthomatous ameloblastoma and peripheral giant cell granuloma (De Bruijn *et al.*, 2007). According to the World Health Organization (Head *et al.*, 2003), the diagnosis of epulis is limited to the fibromatous epulis of periodontal ligament origin, which, along with acanthomatous ameloblastoma, is relatively common in dogs and has well established clinico-pathological features (Head *et al.*, 2002). However, classification of these gingival lesions in the literature varies greatly (Vezzali *et al.*, 2010). The gingival tumours interfere with normal mastication of feed because of their location and pain sensation induced in adjoining areas. At times animal tries to avoid taking feed. This causes production and economic losses to the farmers. The present paper puts on record a case of fibromatous epulis in a buffalo. The reporting of gingival tumors will bring more awareness about economic and productive losses, management and treatment.

A six years old non-descript buffalo with history of growth on gingival mucosa since two months was presented to the Teaching Veterinary Clinical Complex of the University. The clinical examination revealed it to be tumorous growth. Biopsy was done after administration

of local anaesthesia around the growth, tissue specimen was collected and preserved in 10% buffered formalin for histopathological studies. After proper fixation, tissues were cut into small sections with thickness of 2-3 mm and washed overnight in running tap water. After removal of fixative, the tissues were dehydrated in ascending grades of alcohol, cleared in benzene and embedded in paraffin blocks (Luna, 1968). The paraffin embedded tissues were cut into 4-5 μ thick section and stained with Haematoxylin and Eosin (Culling, 1995).

Grossly, the exophytic gingival growth was firm, pedunculated and gray to black in colour. This growth was attached to gum with a short stalk and its surface was smooth. Histopathological examination revealed eosinophilic osteoid tissue surrounded by collagen fibres and fibroblasts (Fig. 1). At margins, engorged blood vessels with erythrocytes, haemorrhage and focal areas of necrosis with marked mononuclear cells infiltration were observed (Figs. 2, 3). Nucleus revealed pleomorphism and increased nuclear: cytoplasmic ratio (Fig. 4). The growth was less cellular but predominated with collagen fibres. The growth appeared to be originating from periodontal region. The growth might have differentiated from fibrous hyperplasia, as the stromal component of the mass consisted of mature fibrous tissue. Based on gross and microscopic findings, it was diagnosed as fibromatous epulis.

Epulis is very common in dogs but its occurrence in buffaloes is rare. The most common type of epulis in the domestic and pet animals is the fibromatous epulis.

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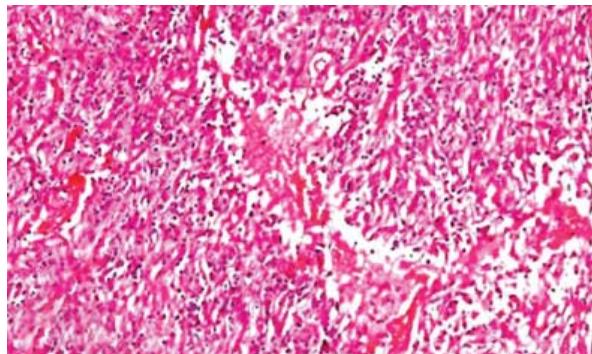


Fig 1. Fibroblast proliferation along with mononuclear cells infiltration.
H & E $\times 200$

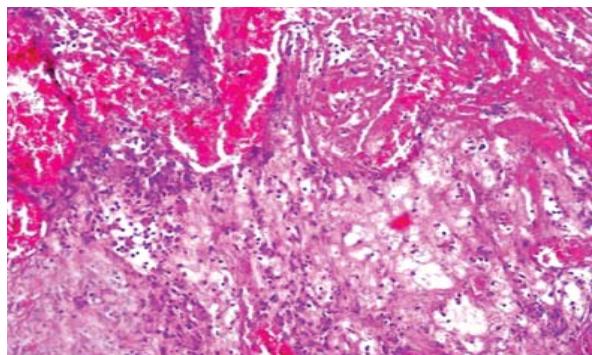


Fig 2. Fibroblast proliferation along with severe vascular congestion and mononuclear cells infiltration.
H & E $\times 100$

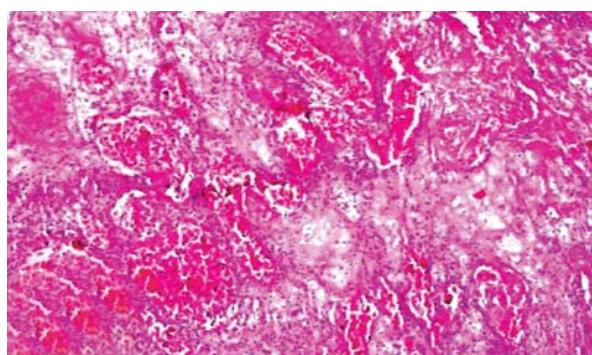


Fig 3. Fibroblast proliferation along with severe vascular congestion and mononuclear cells infiltration.
H & E $\times 200$

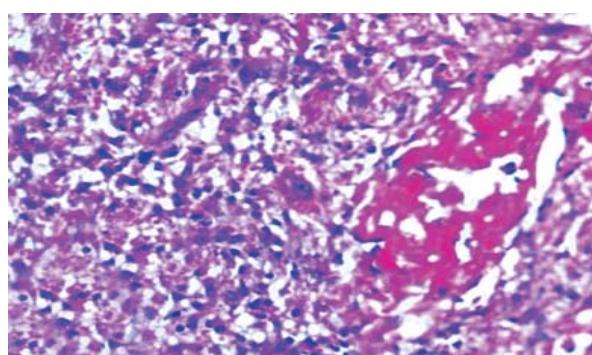


Fig 4. Fibromatous epulis with foci of varying degree of malignancy showing pleomorphic nuclei increased nuclear: cytoplasmic ratio.
H & E $\times 400$

It is a benign solitary or multiple occurring hyperplastic lesions, slowly growing and non-ulcerating (De Bruijn *et al.*, 2007). Histopathologically, it is characterized by vascularized stroma populated by expansive mass of stellate fibroblasts surrounded by variable amounts of densely packed fibrillar collagen. They are distinguished from fibrous hyperplasia by the immaturity of this stroma, which is comprised of small stellate to fusiform fibroblasts dispersed in a dense collagen matrix, and by their tendency to contain less inflammatory tissue and more hard tissue, (Jubb *et al.*, 1993). The occurrence of fibromatous epulis in buffalo is similar to findings of Hablolvarid *et al.* (2012) who reported a rare case of epulis in horse. The localization, gross morphology and histopathological findings of the present case are in agreement with other reports in dogs, cats and captive lion (Head *et al.*, 2002; De Bruijn *et al.*, 2007; Castro *et al.*, 2011).

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