

CHOLANGIOCELLULAR CARCINOMA IN A LABRADOR BITCH: A CASE REPORT

VIKASH SHARMA*, SAKSHI TIWARI, K.K. JAKHAR and BABU LAL JANGIR

Department of Veterinary Pathology, College of Veterinary Sciences

Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar-125 004, India

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ABSTRACT

A seven years old Labrador bitch was presented to this department for post-mortem examination. As reported the bitch had history of inappetence, vomition and weight loss. At necropsy, numerous diffuse greyish-white small patches were observed on liver surface. Histopathologically, cuboidal or columnar cells with a moderate amount of clear eosinophilic cytoplasm and diffused fibrous stroma forming tubular structures at some places were observed. At places solid cellular areas and solid cords of cells along with mitotic figures indicating lack of differentiation and tumour cells in portal vein and sinusoids indicating invasiveness of tumour along with necrosis of hepatocyte were observed. Hyperchromasia and pleomorphism were also detected. Based on gross and microscopic findings, it was diagnosed as cholangiocellular carcinoma.

Key words: Cholangiocellular carcinoma, liver, Labrador bitch

Cholangiocellular carcinoma refers to malignant liver tumours. It is a rare primary hepatic neoplasm originating from intrahepatic and extrahepatic bile duct epithelium with severe morbidity and mortality rate (Lai and Sirica, 1999; Jacobs and Snyder, 2007). They account for 15% of all primary liver tumours and incidence is on rise possibly due to the increased incidence of chronic inflammatory liver diseases (Bergman, 1985). These tumours more often evolve from intrahepatic bile duct epithelium (Ciftci *et al.*, 1998). The incidence of cholangiocellular carcinoma increases with age and most cases occur in geriatric animals (over 10 years of age) (Patnaik *et al.*, 1980; Ciftci *et al.*, 1998). Early diagnosis of cholangiomas is not possible due to the absence of specific clinical symptoms in most cases (Cullen and Poop, 2002). In this paper, we report a case of cholangiocellular carcinoma in a bitch.

Carcass of a seven years-old Labrador bitch was presented to this department for post-mortem examination. As reported by the owner, the bitch had history of inappetence, vomition and weight loss. At necropsy, numerous diffuse greyish-white small patches were detected on the liver (Fig. 1). Liver specimen was collected in 10% buffered formalin for histopathological studies. The tissue specimen was processed and embedded in paraffin blocks (Luna, 1968). The paraffin embedded tissues were cut into 4-5 m thick section and stained with Haematoxylin and Eosin stain following the standard protocol as described by Culling (1995).

Histopathological examination revealed cuboidal or columnar cells with a moderate amount of clear eosinophilic cytoplasm and diffused fibrous stroma forming tubular structures at some places (Fig. 2). At places solid cellular areas and solid cords of cells along with mitotic figures indicating lack of differentiation (Fig. 3) and tumour cells in portal vein and sinusoids indicating invasiveness of tumour along with necrosis of hepatocyte (Fig. 4) were observed. Moreover, hyperchromatism and pleomorphism were also detected.

Based on gross and microscopic findings, the growth was diagnosed as cholangiocellular carcinoma. In comparison with hepatocellular carcinoma, bile duct carcinoma in dog is less common and more malignant, even though cellular pleomorphism and anaplasia are less obvious than hepatocellular carcinoma (Patnaik *et al.*, 1980). Grossly, morphological picture and histopathological lesions in the present study were quite similar to those reported earlier (Moulton, 1990; Javanbakht *et al.*, 2013).

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*Corresponding author: sharmavikashjind@gmail.com



Fig 1. Numerous diffuse greyish-white small patches

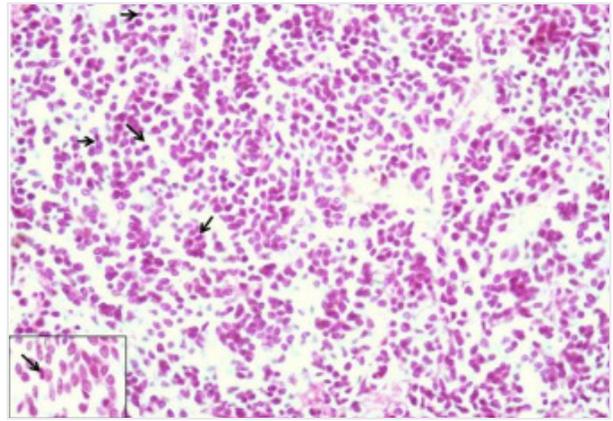


Fig 3. Solid cellular areas and solid cords of cells along with mitotic figures (inset, arrows.) H&E×400

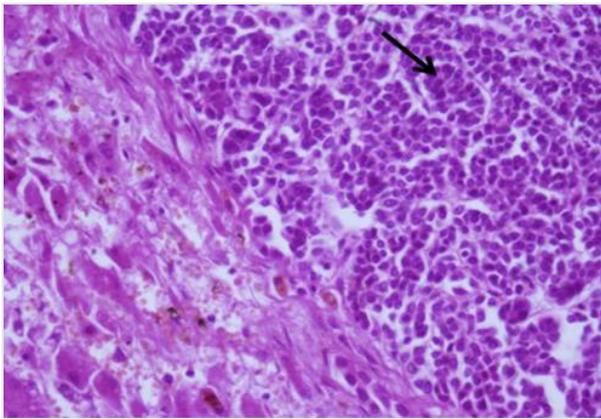


Fig 2. Cuboidal or columnar cells with diffuse fibrous stroma forming tubular structures (arrow) at some places H&E×400

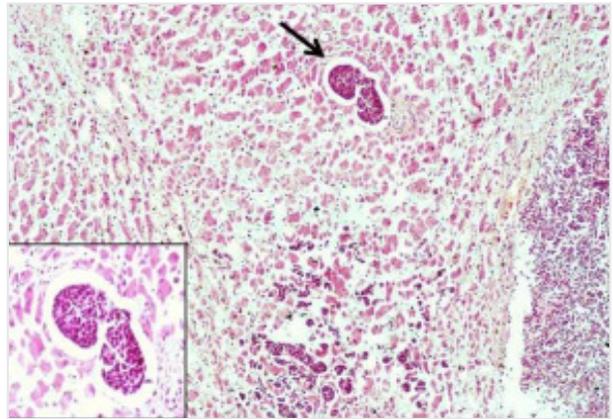


Fig 4. Tumour cells in the portal vein (arrow and inset) and sinusoids indicating invasiveness of tumour along with necrosis of hepatocytes H&E×100

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