# PATHOMORPHOLOGICAL AND HISTOPATHOLOGICAL OBSERVATIONS OF BILE DUCT CARCINOMA IN DOGS (*CANIS FAMILARIS*)

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**ABSTRACT**

A total of 761 carcasses of dogs were examined for liver lesions irrespective of age, sex and breeds. Out of these, 294 liver samples showing frank macroscopic lesions were collected in 10 per cent formal saline for histopathological examination. Bile duct carcinoma was recorded in three cases (1.02%) which were characterized by massive solitary growth or multiple nodules of variable size. The gross and histopathological characteristics have been described.

***Key words*:** Dogs, bile duct carcinoma, histopathology

## Introduction

Liver is known to be as largest gland of the body (Ford, 1965) and important vital organ because it is essential for the life. The liver represents the most important organ of the body in respect to metabolism. Liver plays a major role in detoxification, phagocytosis and nutrition. It also imparts a great role in metabolism of protein, carbohydrate, fat and haemoglobin. Various pathogenic organisms, parasites and toxins entering the blood stream have to pass through the liver because liver has rich venous and arterial supply, so the chances of blood born infections and toxic conditions of liver are numerous. Bile duct carcinoma is one of the very important neoplastic conditions in dogs.

## Materials and Methods

In the present study, a total of 761 carcasses of dogs were examined for liver lesions. Out of these, 294 liver samples showing frank macroscopic lesions were collected in 10 per cent formal saline for histopathological examination. The preserved tissues were processed mechanically for paraffin embedding by acetone and benzene technique (Lillie, 1965). The tissue sections of 4-6 micron thickness were cut and stained with haematoxylin and eosin method of staining.

## Results and Discussion

Bile duct carcinoma was recorded in three cases (1.02 per cent). The gross findings of bile duct carcinoma observed as massive solitary growth sometimes multiple nodules of variable size. The affected liver showed tumor mass in cut surface (Fig. 1). These findings were in close approximation to the findings recorded by Moulton (1978).

Microscopically, there were formation of ductules and acini and sometimes papillary formations were also seen (Fig. 2). These structures were lined by anaplastic cuboidal or columnar cells. The tubules did not contain bile but in well differentiated specimens might contain mucin. These findings are in concurrence with the observations of Patnaik *et al*. (1981) and Ranganath *et al*. (2001).

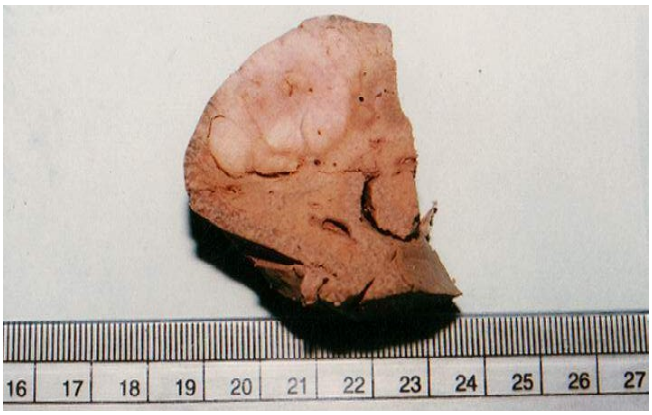


Fig. 1: Photograph of liver having bile duct carcinoma showing tumor mass in cut surface

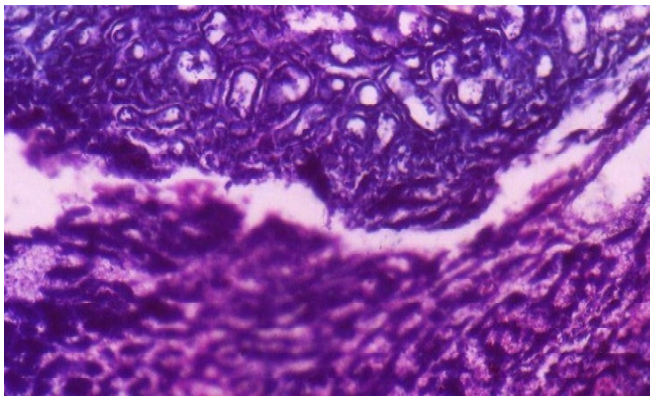

Fig. 2: Microphotograph of liver having bile duct carcinoma showing proliferation of tumor cells (H & E 100X)

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