

PATHOLOGICAL AND HAEMATO-BIOCHEMICAL STUDIES OF LIPOMA IN DOGS

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ABSTRACT

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Lipomas are subcutaneous (underneath the skin) masses or tumours that develop commonly in dogs. Lipoma was overall recorded in 3.28 per cent (5/152) cases. Grossly, these tumours were very large in size, round or ovoid, well circumscribed. Microscopically, lipoma consists of fat cells (adipose tissue cells, adipocytes) along with fibrous component. Fibrous septa usually divide the neoplasm into large lobules and the tumour cells usually have a full compliment of fat.

Key words: Histopathology, lipoma, dog

Introduction

Pets in our society fulfil deep emotional and psychological needs for many of us. They serve as surrogate family for some and for others; they are intimate companions in an otherwise impersonal and sometimes slain society. Pets provide children with a uniquely appropriate form of companionship and encourage attitudes of humaneness, responsibility and gentleness and they teach biological realities. A neoplastic proliferation is an abnormal, non-inflammatory anomalous new growth of tissues which develops uncoordinated and in a haphazard manner as a result of some unusual stimulus and which not only does not serve any useful purposes, but in fact does harm to the body, the degree of which varies according to the nature of neoplasm. Lipomas are subcutaneous (underneath the skin) masses or tumours that develop commonly in dogs. They are usually soft, with limited mobility under the skin. The overlying skin is usually not affected.



Fig. 1: Gross photograph of lipoma which is yellowish in colour, irregular shape and size multilobulated and encapsulated

Materials and Methods

For the present study a total of 152 neoplastic tissue samples of dogs of either sex, different age groups and breeds reported to various clinics at Bikaner, Jaipur, Udaipur, Ajmer

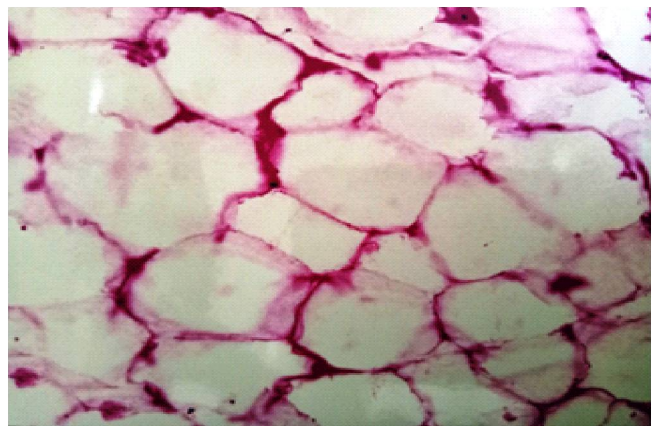


Fig. 2: Lipoma showing fat cells with a full complement of fat (H & E 200X).

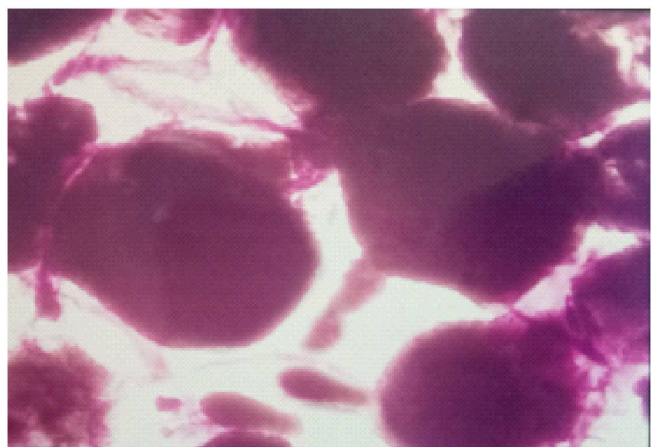


Fig. 3: Lipoma showing black coloured fat. (Osmium tetraoxide 400X) and Jodhpur districts and adjacent areas were taken. Apart from this, specimens submitted to the Department of Veterinary Pathology, College of Veterinary and Animal science, Bikaner for routine post-mortem examination and biopsies for histopathological examination were also included.

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The tissue specimens were collected and preserved in 10 per cent formal saline and were processed mechanically for paraffin embedding by acetone and benzene technique (Lillie, 1965) and stained with haematoxylin and eosin method of staining as a routine. For haematology, blood samples were subjected for examination of haemoglobin, packed cell volume, total erythrocyte count, total leucocyte count, differential leucocytes count MCV and MCHC as per the methods described by Jain (1986).

Results and Discussion

This condition was overall recorded in 3.28 per cent (5/152) cases and 9.26 per cent (5/54) cases reported for tumour of skin and subcutis. Bordey and Roszel (1967) recorded little lower incidence. Grossly, these tumours were of irregular size and shape and may be quite large. They were usually round, ovoid or pedunculated and were commonly multilobulated, well circumscribed and encapsulated, soft or flabby (Fig. 1). Hupes *et al.* (2016) recorded similar observation.

Microscopically, lipoma consists of fat cells (adipose tissue cells, adipocytes) along with fibrous component. Fibrous septa usually divide the neoplasm into large lobules and the tumour cells usually have a full complement of fat (Fig. 2). Duplicate section stained with osmium tetroxide staining method revealed black coloured fat (Fig. 3). These observations

are in agreement with findings described by Moulton (1978) and Degloorkar *et al.* (1992).

Mean±S.E. values recorded for haemoglobin, TEC, TLC, DLC, PCV, MCV, MCHC and biochemical parameter for lipoma did not reveal any appreciable effect of these parameters and the values were more or less in close agreement with values recorded for healthy dogs.

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