

HIBERNOMA IN A NEONATAL CALF

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Ochoa (1972) reported a case of hibernoma in the omentum of a 9 month old male Labrador dog and observed that these tumours resembled the hibernating gland of which brown fat was the main tissue component. Its occurrence in man is not uncommon but rare in veterinary literature. Hence a case observed in a neonatal calf is reported here.

OBSERVATION AND DISCUSSION

A day old cross-bred male calf was presented for treatment with an oval mass of about 8×5 cm in size and attached to the skin at the left lateral aspect of abdomen by a long thin cord like pedicle measuring about 15 cm in length (Fig. 1). It was about 5 cm anterior to the scrotum and 8 cm posterior to umbilicus. The same was removed by Surgery. It weighed 73 g, spongy in consistency and pinkish brown in colour. On incision the growth presented a honey comb appearance and about 51 ml of brownish fluid oozed out. Tissues were collected in formalin and paraffin embedded sections of 4-6 μ thickness were stained by Haematoxylin and eosin method.



Fig. 1 Note the growth attached to the ventral aspect of the abdomen.

Microscopically, the growth was encapsulated. Numerous clusters of multiloculated large oval to polygonal cells were arranged in irregular lobules supported by thin connective tissue stroma (Fig. 2). The nucleus was spherical in shape and more or less central in position. Mitosis was not seen. The cytoplasm contained multiple lipid vacuoles of various sizes and was granular. Brownish pigments were sparsely present in the cytoplasm of these cells throughout the tumour mass. Abundant capillaries were present.

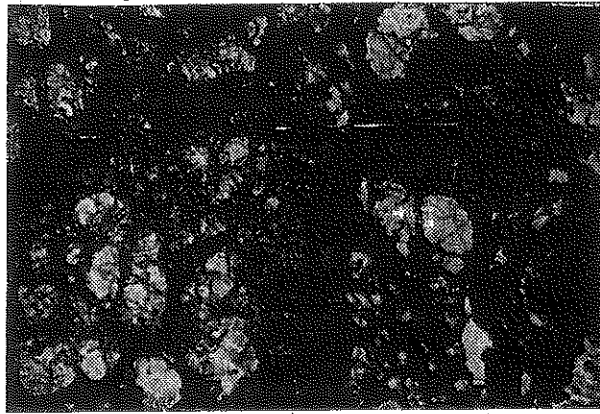


Fig. 2
Note the clusters of
multiloculated cells with
granular cytoplasm.
H&E $\times 320$.

The histological picture of clusters of cells with multilocular lipid vacuoles, granular cytoplasm, a spherical nucleus and the fat not being readily dissolved by xylol with structural similarities is consistent with a diagnosis of Hibernoma.

Hibernoma was reported in man as an infrequent variant of lipoma occurring in adults and less commonly in adolescents and children (Ashley, 1978). Its incidence in animals is rare and a case in a 9 month old Labrador dog was presented by Ochoa (1972). The present report was in a day old bull calf.

Moulton (1978) suggested that tumors resembling brown fat represent a variant of lipoma. Ashley (1978) considered that the multilocular fat exists as a temporary phase of yellow fat and the frequent presence of brown fat in the human foetus, was suggestive of immature yellow fat, once existed in a multilocular form. Ochoa (1972) observed that brown fat was a tissue component of the hibernating gland and demonstrated it to present in other mammals such as dog, cattle, rats, mice and rabbits that do not hibernate. In man, hibernomas develop in areas, such as neck, shoulder, axilla and mediastinum, where adipose tissue remains in an immature state at birth while in animals it is apparently immutable (Ashley 1978). The structural similarities, location of growth and occurrence in a neonatal calf in the present report suggests that it is a tumor of the brown fat of the hibernating gland.

SUMMARY

A case of hibernoma on the left lateral aspect of abdominal wall in a day old bull calf has been reported.

ACKNOWLEDGEMENT

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