EPITHELIOID HEMANGIOMA IN A MALE HOUND DOG: A CASE REPORT

V. S. Dhoke, P. R. Pande, Madhuri Hedau, R.S. Ingole and M.V. Joshi

Department of Veterinary Pathology

Post Graduate Institute of Veterinary & Animal Sciences, MAFSU, Akola 444 104, India

Received 2-10-2015 ***Accepted 25-1-2016***

Corresponding Author : drmshedau@rediffmail.com

Hemangiomas are benign neoplasms of vascular endothelium often found in the skin of dogs (Goldschmidt and Hendrick, 2002; Zachary and McGavin, 2012). Hemangioma arises from vascular endothelial cells of the dermis or subcutaneous tissues in about equal frequency. There is no sex predilection for the presence or absence of hemangiomas. The average age of affected dog is nine years, though the tumor may develop in much younger dogs (Meuten,2002). A wide variety of dog breeds are affected, but Italian Grey hounds and Whip pets are over represented (Schultheiss, 2004). Hemangiom as are ovoid or discoid in shape, moderately firm and they are reddish black and blood oozes from the surface. In dogs hemangiomas are typically benign, solitary, deep dermal tumors (Cooley *et al.,* 1997). Diagnosis of skin tumors usually includes evaluation of cells using cytology and histopathology in cases where a biopsy is taken, Paucity of tumor in Hound dogs prompted us to put on record a case of epithelioid hemangioma in this breed.

CASE HISTORY CLINICAL OBSERVATIONSAND DIAGNOSIS

A male Hound dog of 6 years age was presented to Pet Clinic at Sangli with history of anorexia, inability to run and multiple nodular bleeding lesions on ventral surface of body and medial side of legs (Fig.1). Dermatological examination revealed solitary, multiple nodules of unknown duration and of different sizes. The largest ulcerated growth was excised (Fig.2.) under local anaesthesia. Excisional biopsy samples fixed in 10% buffered formalin and embedded in paraffin were cut into 4-5 um thick sections and stained with H and E for histopathological examination. Anticarcinogenic treatment of dog resulted into regression of neoplastic growths and restoration of body weight and stamina.

Fig. 1. 6 year old Male Hound dog with cutaneous epitheloid hemangioma on ventral skin and legs (Arrow).

Fig.2. Skin; Hound dog. Multiple, red brown lesions on the hind leg with excisional biopsy site (arrow).

Microscopically, the tissue section revealed presence of ulcerated epidermis with stratified squamous epithelium and haemorrhages. The subepithelial tissue showed mass of granulation

tissue along with focal areas composed of irregular vascular spaces lined by plump endothelial cells with mononuclear cell infiltration (Fig. 3.). Short strands and solid nests of rounded to slightly spindle shaped epithelioid cells were also observed (Fig. 4.). Cells showed prominent cytoplasmic vacuolations. The interlacing stroma showed increased hyalinization with focal mononuclear cell infiltration. Tumor cells were invading underlined muscle tissue. The adjacent subepithelial tissue showed dense and diffuse lymphocytic infiltration forming germinal centres with few eosinophils. Cells did not reveal mitotic figures. On the basis of histologic findings, diagnosis of epithelioid hemangioma was made.

DISCUSSION

Hemangiomas are dermal or subcutaneous tumors occurring anywhere in the body, but include limbs at higher percentage (Schultheiss, 2004). Dogs with short hair coat and lightly pigmented skin had more hemangiomas on dermis and ventral glabrous skin and fewer hemangiomas of subcutaneous tissues, and may be caused by prolonged exposure to sunlight and the biologic properties of glabrous skin in the genesis of these tumors (Hargis *et al*. 1992).There are slightly more numbers of hemangiomas in females (Schultheiss, 2004). In the present case, hemangiomas of subcutaneous tissue on the ventral part and legs were observed in male dog. Well differentiated vascular channels often seen in endothelial tumors are less conspicuous or lacking in epitheloid varients and because the cells have an epithelioid morphology, this group of neoplasm pose a diagnostic challenge (Gross *et al.* 2005).

The epithelioid hemangioma in dog share pathologic features described for this tumor in horse. In this case, granulation tissue and irregular vascular spaces lined by plump endothelium and mononuclear cell infiltration and solid nests of rounded to slightly spindle shaped endothelial cells with vacuolation were observed.

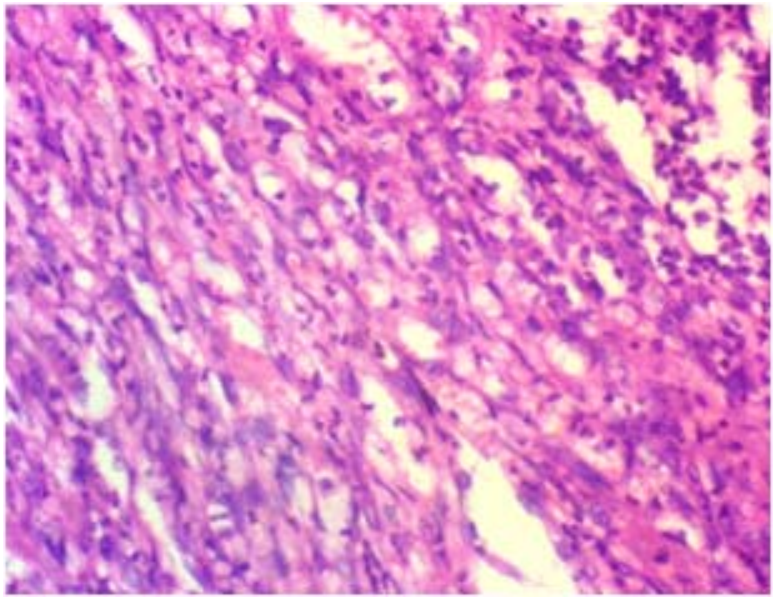

Fig.3. Section showing granulation tissue and irregular vascular spaces lined by plump endothelial cells with mononuclear cell infiltration. H & E x 400

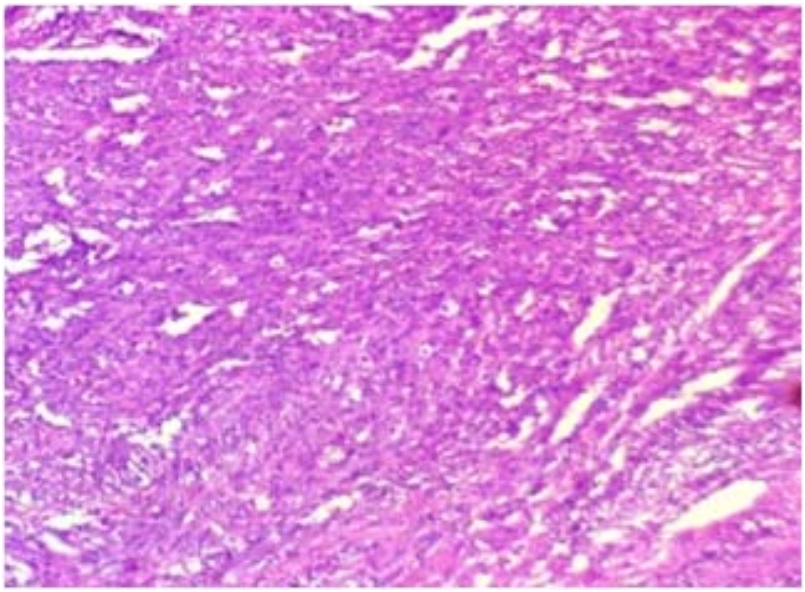

Fig.4. Dermis; epitheloid hemangioma:solid nests of rounded to slightly spindle shaped epithelod cells with vacuolations. H & E x 100.

Mitosis was not prominent in this case. Prominent inflammatory lymphoid infiltrate described in horse was present in this case (Warren and Summers, 2007).

REFERENCES :

Cooley, D.M., Allen, D.K. and Waters, D.J. (1997). *Kleintierpraxis*. 42:89-870.

Goldschmidt, M.H. and Hendrick, M.J. (2002). Tumors of the skin and soft tissues. In:Meuten DJ, ed. *Tumors in Domestic Animals*. 4th ed. Iowa State Press, Avenue, Ames, Iowa:99-105.

Gross, T.L., Ihrke, P.J., Walder, E.J. and Affolter, V.K. (2005). Skin diseases of dog and cat: Clinical and histopathologic diagnosis. Blackwell Science, Oxford, United Kingdom:735-753.

Hargis, A.M., Ihrke, P.J., Spangler, W.L. and Stannard, A.A. (1992). *Vet Pathol.* 29:316-328.

Meuten, D.J. (2002). *Tumors in Domestic Animals* 4thedn Iowa State Press, Ames, Iowa. 99.

Schultheiss, P.C. (2004). *J. Vet. Diagn. Invest.* 16:522-526.

Warren, A.L. and Summers, B. A. (2007). *Vet. Pathol*. 44:15-24.

Zachary, J.F. and McGavin, M.D. (2012). *Pathologic Basis of Veterinary Diseases* 5thedn Elsevier, Canada.

❑