



*Clinical Report*

## Gingival Hemangioma in a Sheep

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### Abstract

**Case Description-** A five-year-old Iranian cross-breed ewe with a dark red and soft mass on gingiva of mandibular region was presented to the Islamic Azad University of Tabriz Veterinary Medical Teaching Hospital. Macroscopically, a dark red, pedunculated, round-shaped and soft mass less than 1.5 centimeter on gingival compartment of right midlateral edge was observed. Temperature, heart rate and respiratory rate were not clinically abnormal.

**Treatment and Outcome-** The abnormal mass was removed surgically by local anesthesia. Histopathological examinations confirmed the occurrence of gingival hemangioma.

**Clinical Relevance-** Hemangiomas have been recorded in cattle, horses, sheep, swine and fowls, but it is only in cats and dogs that frequency of occurrence has been estimated.

**Key Words-** Sheep, Gingiva, Hemangioma.

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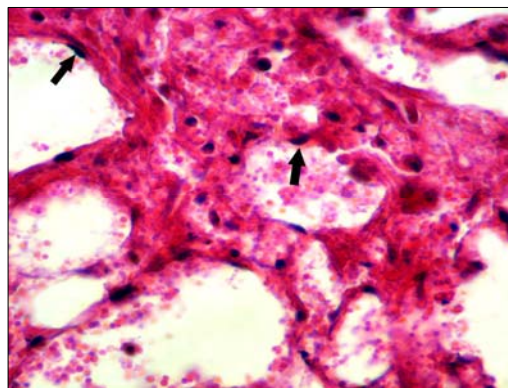
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## Case Description

On April 2006, a five-years-old Iranian cross-breed ewe weighing 39 kg with a dark red, pedunculated, round-shaped and soft mass less than 1.5 centimeter on gingival compartment of midlateral edge of mandibular region was presented to the Islamic Azad University of Tabriz Veterinary Medical Teaching Hospital (Fig. 1). The animal had weight loss and anorexia. Temperature, heart rate and respiratory rate were not clinically abnormal. Adjacent tissues were grossly normal. The mass was vulnerable to manipulation and bled when manipulated.



**Figure 1:** Sheep Gingival Hemangioma. A dark red, pedunculated and round-shaped tumor (arrow) is seen on gingival compartment of midlateral edge of mandibular region.



**Figure 2:** High power magnification of Hemangioma in the gum of sheep. The lesion composed of variably sized, closely packed blood-containing spaces. A single layer of endothelial cells (arrows) lines the spaces. (H&E),  $\times 400$ .

## Treatment and Outcome

The mass was resected by local anesthesia. For identification of the tumor histopathologically, representative sections of the tumor were fixed immediately in 10% neutral buffered formalin, processed routinely, and embedded in paraffin. Tissue sections were cut to 4 $\mu$ m thickness and stained with hematoxylin-eosin.

On cut surface tumor mass was pink to red. Macroscopic features of the tumor indicated the benign tumors characteristics. Microscopically, the tumor had a distinctive morphology consisting of variably sized, closely packed and blood containing spaces separated by a scant connective tissue stroma. A single layer of endothelial cells lined the spaces. In some places, there were more layers. The cells showed oval, flattened and spindle shapes. The cytoplasm was acidophilic. The nuclear chromatin was coarse and basophilic (Fig. 2). The lesion abolished surgically and controlled by Dexamethasone. There was no recurrence at the surgical site 1 year after removal of the tumor (Fig 3). Our findings supported the diagnosis of gingival hemangioma based on morphologic features and histologic patterns.

## Discussion

Hemangiomas are benign tumors of vascular endothelium often found in the skin of dogs.<sup>1</sup> These red blood-filled masses are well circumscribed and vary in size. They are usually single but may also be multiple.<sup>1,2</sup> Hemangiomas have been recorded in cattle, horses, sheep, dogs, swine and fowls, but it is only in cats and dogs that frequency of occurrence has been estimated.<sup>2,3</sup> For example, studies have shown frequency as 1.75 percent of canine lingual tumors,<sup>4</sup> 0.5 percent of canine maxillary tumors<sup>5</sup>, and 1.1 percent of feline lingual tumors.<sup>6</sup> Nine hemangiomas involving one site have been recorded, all involving calves 6 months old or younger.<sup>7</sup> To



**Figure 3:** There is no recurrence 1 year after removal.

the best of our knowledge, this is the first case of hemangioma in the gum of sheep, reported from Iran. Care should be taken not to confuse hemangiomas with hamatomas, which are developmental defects of the blood vascular system. In inflammatory conditions, a rich supply of blood vessels may be present in certain areas, resembling an angioma; but such lesions contain abundant connective tissue and cellular exudates.<sup>3</sup> Depending upon the kind of hemangioma, capillaries or blood-filled spaces may be seen. Usually a single layer of endothelial cell lines the capillaries and spaces. Sometimes there may be more layers. In others, the lumen may be filled completely with proliferated endothelial cells only. The cells show various oval, polyhedral, flattened or spindle shapes. However, for differential diagnosis, factor VIII related antigen can be used in formalin fixed, paraffin processed sections as a marker for normal and neoplastic cells as well as for reactive and tumor neovascularizations. The majority of canine cutaneous hemangioma cells have been shown to contain intracytoplasmic positive granules.<sup>8,9</sup> Considering the pathological characteristic of hemangiomas and the result of this limited study, it is recommended that hemangiomas found externally, be removed surgically. It seems that, this is the only practical procedure that can be performed on a sedated sheep with the help of local anesthesia.

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## گزارش اولین مورد همانژیوم لته گوسفند در ایران

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**توصیف بیمار** - یک رأس میش دو رگ ۵ ساله ایرانی با توده ای نرم به رنگ قرمز تیره بر روی لته فک پایین به بیمارستان آموزشی درمانی دامپزشکی دانشگاه آزاد اسلامی تبریز ارجاع داده شد. در مشاهدات ظاهری، توده ای نرم به رنگ قرمز تیره، پایه دار، کروی شکل و به قطر کمتر از ۱/۵ سانتیمتر بر روی لته قسمت میانی جانبی فک پایین طرف راست میش مشاهده شد. دمای بدن، ضربان قلب و تعداد تنفس به صورت نرمال بود.

**درمان و نتیجه آن** - توده غیر طبیعی به صورت جراحی و تحت آرامبخشی و بی حسی موضعی برداشته شد. یافته های هیستوپاتولوژیک وجود همانژیوم لته را تایید نمودند.

**کاربرد بالینی** - همانژیوم لته در گاو، اسب، گوسفند، خوک و ماکیان ممکن است اتفاق بیفتد، ولی رخداد همانژیوم لته در سگ و گربه بیشتر گزارش شده است.

**کلید واژگان** - گوسفند، لته، تومور، همانژیوما.

