

Dermoid cyst in a bull

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A 3-year-old Angus bull was admitted for evaluation of a mass in the throatlatch area, which had been observed intermittently for approximately 18 months. The mass first developed 3 days after the bull had been handled in a squeeze chute during routine herd health care. At that time, needle aspiration of the swollen area yielded fluid that was grossly interpreted to be saliva, although no laboratory or cytologic examination of the fluid was performed. The mass had varied in size during the next several months, but the bull's prehension and mastication had not been affected.

The mass greatly enlarged approximately 12 months after its initial observation. The referring veterinarian incised the fluctuant mass to allow drainage of approximately 2 quarts of serous fluid and hair.

The mass enlarged again approximately 6 months later, and the bull was referred. Physical examination revealed a 15-cm fluctuant, but not compressible, swelling located on the midline of the ventral aspect of the cranial portion of the cervical area. The mass was not movable. Attachment to adjacent structures could not be determined because of the thickness of the bull's skin. Feed and water were withheld from the bull for 48 hours in preparation for general anesthesia to facilitate thorough examination and treatment.

The bull was restrained in right lateral recumbency on a tilt table. General anesthesia was induced by use of thiamylal sodium, IV, and maintained by use of halothane vaporized in oxygen.

Radiography of the affected ventral cervical region failed to detect a radiopaque foreign body or a mineralized component of the lesion. The area was clipped and scrubbed for aseptic surgery. Needle aspiration of the mass revealed serosanguineous fluid, which was submitted for aerobic and anaerobic bacterial culturing. Incision of the mass allowed evacuation of approximately 2 L of fluid from the cystic cavity. The lesion was 12 × 14 cm in diameter, with a wall measuring 7 to 30 mm thick. The cavity was lined with hair, and pigmented and nonpigmented skin. The lesion was excised and submitted for microscopic evaluation. The surgical wound was packed with roll gauze, and the subcutaneous tissues and skin were closed routinely over the gauze, leaving an exit portal for removal of the gauze. The bull was given procaine penicillin G (22,000 U/kg of body weight, IM) for

5 days. Gauze and skin sutures were removed 10 days after surgery, and the bull was discharged. There has been no redevelopment of the lesion in 18 months.

Anaerobic culturing yielded *Fusobacterium necrophorum* and 2 colony types of *Bacteroides* sp. Aerobic culturing yielded a *Proteus mirabilis* that was susceptible to many antimicrobials, including penicillin.

Microscopically, the exterior of the lesion was covered with normal skin. The interior of the cystic structure was lined by stratified squamous epithelium that covered vascularized connective tissue. Hair follicles, sebaceous glands, and sweat glands were associated with the epithelium. The hair shafts and accessory glands emptied into the lumen. The lesion was diagnosed as a dermoid cyst.

Dermoid cysts or dermoid sinuses are most often seen in Rhodesian Ridgeback dogs, although a dermoid cyst has been reported ventral to the eye of a calf.¹ The dermoid sinus generally is located on the dorsal midline of the back. It is a blind-end tube of various depth. Some sinuses terminate in the subcutaneous tissues, whereas others attach to the dura mater. The sinus lining contains hair follicles and sebaceous glands; therefore, the cyst contains hair and sebum.^{2,3} In retrospect, the initial thick fluid removed from this cyst was probably sebum, rather than saliva.

A similar lesion seen in human beings is the pilonidal sinus. Some physicians believed that pilonidal sinus was an acquired lesion; however, the lesion seen in the sacral region is congenital.⁴ Some reports of pilonidal sinuses in other areas of the body, especially the hands of barbers, would lend support to an acquired component of the lesion.⁵⁻⁷

The location of the lesion in the bull of this report differs from those of suspected congenital lesions in dogs and human beings. The dermoid cyst in the bull of this report was suspected to be acquired.

1. Adams SB, Horstman L, Hoerr FJ. Periocular dermoid cyst in a calf. *J Am Vet Med Assoc* 1983;182:1255-1256.

2. Stratton J. Dermoid sinus in the Rhodesian Ridgeback. *Vet Rec* 1964;76:846.

3. Mann GE, Stratton J. Dermoid sinus in the Rhodesian Ridgeback. *J Small Anim Pract* 1966;7:631-642.

4. Dwight RW, Maloy JK. Pilonidal sinus: experience with 449 cases. *N Engl J Med* 1953;249:926-930.

5. Aird I. Pilonidal sinus of the axilla. *Br Med J* 1952;1:902-903.

6. Patey DH, Scarff RW. Pilonidal sinus in a barber's hand. *Lancet* 1948;253:13-14.

7. Patey DH, Scarff RW. Pathology of postanal pilonidal sinus. *Lancet* 1946;251:484-486.

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