

Breeding Soundness Examination of a Longhorn Bull Pelleted with Lead Shot

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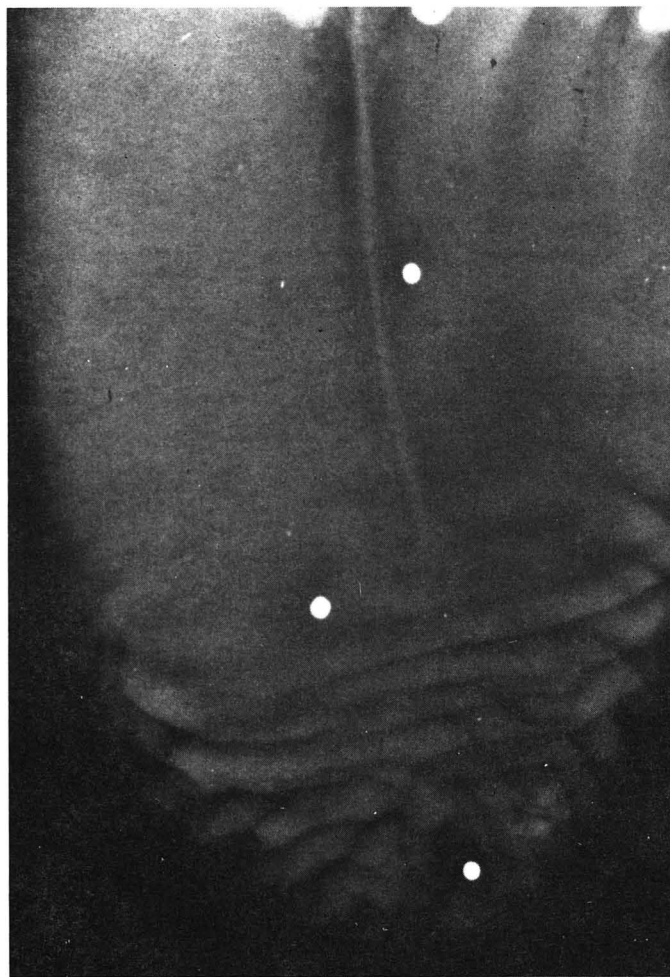
A five year old Longhorn bull was presented to the Texas Veterinary Medical Center (TVMC) for a breeding soundness examination and examination of a right forelimb lameness. The history indicated that the bull had been lame due to an unknown etiology for some time and had questionable fertility. The bull had not been in the owner's immediate possession for approximately six months prior to examination. A referring veterinarian had examined the bull a short time before the animal was presented to the TVMC for evaluation. He indicated that the bull's semen quality was poor and that he had a lameness.

Physical examination found the bull to be generally in good condition; however, the right carpus was swollen and the bull demonstrated a lameness in the right forelimb. Radiographs of the right carpus revealed a marked periosteal reaction involving the dorso-medial aspect of the metacarpus, with less pronounced periosteal reaction on the dorsal aspect of the radial carpal bone and some periosteal reaction on the dorsal aspect of the distal radius. Several metallic shots (thought to be #6 bird shot) were observed scattered throughout the soft tissues on the palmar aspect of the carpus and caudal aspect of the antebrachium. Radiographs of the left forelimb demonstrated marked soft tissue swelling over the dorsal aspect of the carpal region and the presence of two pellets on the palmar aspect.

Examination of the external genitalia revealed a normal penis and prepuce, the presence of scrotal dermatitis,

and a scrotal circumference of 34 cm. Palpation of the scrotal contents revealed a slight asymmetry of the testes with the left testicle being smaller than the right. The head of the right epididymis was enlarged and firm. Palpation of the internal genitalia per rectum did not reveal any abnormal-

Figure 1: Radiograph of bull's scrotum containing lead shot.



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malities. A complete blood count revealed normal parameters and serological examination for brucellosis and leptospirosis was negative. Cultures of preputial smegma was negative for trichomoniasis and campylobacteriosis organisms.

A semen sample collected by electro-ejaculation contained spermatozoa exhibiting poor motility with sixty-four percent primary abnormalities and twenty-eight percent secondary abnormalities. Microbial culture of the semen sample yielded a moderate growth of *Corynebacterium spp.*

Evidence of metal dense pellets in the forelimbs in conjunction with the poor seminal parameters prompted radiographic examination of the scrotum. Using mammography film and techniques, multiple metal dense pellets were found within the scrotum. (Figure 1).

Based upon the clinical findings, the bull was classified as an "Unsatisfactory Potential Breeder".¹A poor prognosis was given to the owner for resolution of the lameness as well as for return to normal fertility. The owner was instructed to have the bull re-evaluated in six months. The bull was presented at another large animal referral clinic for a breeding soundness examination approximately one year later. The conclusions of the veterinarian were in agreement with those previously given to the owner; however, the veterinarian also recommended that the right testicle be removed because the right sper-

matic cord was abnormally swollen based upon ultrasonographic examination. The right testicle was removed and the bull was given six months sexual rest. Following this sexual rest period, the bull successfully bred four cows. The next breeding season twenty-one cows were successfully bred by this bull. Currently, the bull still shows signs of forelimb lameness and is being used in a natural mating breeding program on a limited basis.

This case is presented because it 1) demonstrates the importance of being thorough while conducting a lameness and/or breeding soundness examination of a bull, 2) is an example of one bull that in spite of an extremely poor prognosis for fertility has since sired more than twenty-five calves, and 3) is an example of a bull that responded favorably to unconventional and radical treatment. Although not used routinely, selected radiographic and ultrasonographic examination of the scrotal contents can aid in the diagnosis of some infertile bulls.

The advisability of unilateral castration to salvage a breeding animal is often questioned because there are few well documented cases in which breeding records are available to assess fertility following this surgery. Providing an accurate prognosis for breeding soundness in bulls intended for natural service is difficult, even with the best of circumstances. Veterinarians must be careful in condemning bulls that may, with time and treatment, become satisfactory breeders and in passing bulls for breeding soundness that will never become satisfactory breeders. A prognosis for breeding soundness should be given only after a careful, thorough examination is completed and evaluated.

¹Classification of the Society for Theriogenology, P.O. Box 2118, Hastings, Nebraska 68902-2118.