

Ultrasonic Treatment of Penile Hematoma in Bulls

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Corrective surgery for hematoma of the penis has been used for many years (1,2,3,4). Basically, this method is comprised of using sterile surgical technique to remove the blood clot and suturing the rent in the *tunica albuginea* of the penis followed by skin sutures to close the surgical incision. Metcalf (5) described a variation in clot removal by using a stab incision and suction. The above methods are followed by sexual stimulation soon after the surgery—breeding or electro-ejaculation.

Surgical results for repair of penile hematoma have been erratic. Vandeplassche, et al. (6), reported 57% recovery following surgery, as compared with 60% recovery without surgery. In view of the erratic results, ultra sound was tried in lieu of surgery in an attempt to hasten clot resorption and to minimize adhesions. Ultra sound produces local heat and “micro massage” in the treated area. The results herein refer to bulls treated from 1973 to 1976. Ultra sound was used for several years before 1973, but the treatment methods varied and there was no standardization for comparison of results.

Lesion Description

All of the treated lesions were in the body of the penis just anterior to the base of the scrotum. The hematomas were symmetrically enlarged, firm in texture and rather heavy on lifting them. The penis was not palpable in the hematoma areas. Secondary prolapsing of the preputial mucosa and/or the penis with occasional lacerations of the mucosa occurred in several cases.

Differentially, primary preputial lacerations or abscesses should not be confused for hematomas. They occur in the preputial area and not at the base of the scrotum.

Basic Procedure

Treatment was delayed for six to eight days after the injury to avoid further bleeding due to tissue heat produced by ultra sound. Some treated bulls were not submitted to the Washington State University Clinic for up to 10 to 20 days after the injury. The skin over the hematoma was shaved or clipped (#40 clipper blade) prior to treatment, and this was repeated 7 to 10 days later if the hair stubble became dense enough to muffle ultra sound transmission. A coupling agent (Medco lotion, Medco Products Co., Tulsa, Okla.)

was applied to the shaved area prior to each treatment session to facilitate sound wave conduction from the machine head (transducer) to the skin and deeper tissues. Both sides and the bottom of the entire hematoma were treated with ultra sound for 10 minutes at a power setting of 1-1/2 watts per square centimeter in a steady rotary motion over the area. Treatment was given daily for 12 to 14 doses. From the initial treatment to the final treatment the lesions usually diminished to 1/3 of the entry size. Following ultra sound treatment no sexual stimulation (breeding or electro-ejaculation) was allowed for at least three months.

Treatment Adjuncts

Where indicated, the prolapsed preputial mucosa and/or penis were replaced within the prepuce and three or four retaining sutures were placed at the preputial orifice for three to five days. One Brahma bull required surgical correction of a preputial prolapse. If there were penile or preputial lacerations, an ointment containing antibiotic and corticosteroid (Panolog ointment, E. R. Squibb & Sons, Princeton, N.J., or Furacort cream, Eaton Veterinary Laboratories, Norwich, N.Y.) was instilled into the preputial cavity and massaged for a few minutes once a day for five to seven days. Bulls with lacerations also received appropriate doses of penicillin and streptomycin (Combiotic, Pfizer, Inc., New York, N.Y.) intramuscularly once a day for three to five days.

Results

Thirty-two bulls with penile hematomas were examined. Twenty-seven of the 32 bulls were treated. The other five animals were slaughtered for salvage. Of the 27 bulls treated, 17 became successful breeders, five failed to return to normal breeding, one bull had questionable benefit (breeding was hampered due to erratic ability to penetrate cows), and four cases were too early to test breed at the time of publication. The 17 successful breeding bulls as compared with the five non-breeding bulls yielded a 77+% success rate.

Discussion

Ultra sound therapy using standard therapy units that are used for treating man or animals seems to be

an effective treatment for penile hematomas. New ultra sound units cost \$450 to \$650, but used units often are available for \$150 to \$200 from surgical supply houses. If the veterinarian does not own a unit, some supply houses will rent an ultra sound machine on a short-term basis. Thus, an owner of a penile hematoma bull can often rent a unit for the treatment period. Treatment is not difficult, but due to the considerable time involved, treatment is more logically applied by a veterinary employee, or, with instruction, the owner or his employee can do the treatment series on the farm or ranch.

Three of the five failures were due to abscessed hematomas. All three had histories of paracentesis with hypodermic needles used for diagnosis. Paracentesis may have caused the abscesses due to introducing infection with the needles. Paracentesis is not needed for diagnosis, and the danger of abscess formation precludes its use.

The value of a bull with a penile hematoma is an important consideration prior to treatment. Three months of sexual rest usually means that one breeding season is lost in beef herds. Therefore, "cheap" bulls are better handled by slaughter for salvage and replacement with a bull that can be used for the immediate breeding season.

Even the five failures in this series were not complete in that, despite adhesions and an inability to protrude the penis, semen from these bulls could be

collected by electro-ejaculation for artificial insemination.

Following a three-month sexual rest period, treated bulls should be allowed to breed several cows before deciding success or failure. In two instances, owners tested bulls on one or two cows and, even though the bulls mounted, performed intromission and ejaculated, they were shipped to slaughter because the first one or two cows did not conceive! Some owners associate infertility with penile hematoma, not understanding that it is a mechanical problem of the penis unrelated to testicular physiology.

Summary

Ultra sound applied daily for 12 to 14 days for 10 minutes at 1-1/2 watts per square centimeter will salvage many penile hematoma bulls for breeding purposes.

References

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