

Preparation of Teaser Bulls by Penectomy Using the Method Described by Straub & Kendrick

E. R. Lindner, D. V.M., and
J. D. Samuelson, D. V.M., M.S.
Dodgeville Veterinary Service
Dodgeville, Wisconsin

With the advent of A.I., the problem of heat detection arose and numerous methods to solve the problem have been developed. These methods vary from frequent observation to the use of steers as heat detectors.

The most prevalent method of heat detection used in our area is observation and when the observer is observant, it is quite successful. However, I am sure most of you have been as frustrated as I have been in some herds where the manager can't or doesn't catch cows in heat. Although I haven't had the opportunity to see a penectomized bull used in a dairy herd, I hope they will work as well there as in the beef herds that have used them.

The surgical procedure I am about to describe was developed by Drs. Straub and Kendrick at the University of California* and consists essentially of removal of the penis similar to the surgical procedure used for treatment of urethral calculi lodged at the sigmoid flexure.

The main advantage of the penectomized bull as a teaser instead of a steer or vasectomized bull is disease prevention, for without a penis the threat of spread of a venereal disease is eliminated. Of course, without the advent of the chin ball marker the teaser bull would be of limited advantage. The chin ball marker is paint-filled "ball-point pen" that straps under the chin of the bull and will mark a cow when the bull begins to mount or as he dismounts.** The chin ball marker is manufactured in New Zealand and in this area is supplied by A.B.S.

Bulls selected for this surgery should be between eight and eighteen months of age. It has been recommended that only bulls of a beef breed be used as teaser bulls because of their temperament as compared to the dairy breeds.

The surgery is performed in a standing position with the bull restrained in the head gate or

chute. The tail head and perineal area are clipped, scrubbed and disinfected in preparation for surgery. An epidural anesthetic is given using five to ten ml. lidocaine to prevent movement of the tail and defecation during the operation.***

A pudendal nerve block is given to anesthetize the penis using 10 ml. of lidocaine infiltrated around the nerves as they pass over the ischial arch on the anterolateral aspect of the penis (Figure 1).

At a midpoint between the anus and the attachment of the scrotum a four inch midline incision is made and extended down to the penis. The penis, which lies about four to five inches under the skin, is located and separated by blunt dissection and pulled to the surface. Straub and Kendrick stated that with strong traction the penis can be pulled from its attachment on the ventral abdomen and prepuce. This is an understatement, for we have found it takes all you can pull plus a little more to pull the penis out. The older the bull the more difficult it is and this is why I would be apprehensive about doing this surgery on a bull over 18 months of age. It was described in the paper that on older bulls a circular incision could be made around the penis at the attachment of the prepuce to facilitate pulling the penis, but we have not had to do this so far.

After the penis is pulled from its attachment out through the incision, a figure 8 ligature using heavy Vetafil is placed through the penis about one inch distal to the lowest point of the skin incision.**** This ligature is to prevent hemorrhage from the cut end of the penis, so care should be taken to make sure this ligature is tied tightly. The penis is then amputated distal to and as close to the ligature as possible to minimize the amount of necrosis (Figure 2A).

At the level of the lower commissure of the skin incision, the penis is incised transversely on its posterior aspect to the depth of the greatest

*Department of Medicine, Surgery and Clinics, School of Veterinary Medicine, University of California, Davis, California.

**American Breeder Service, De Forest, Wisconsin.

***2% Lidocaine Hydrochloride, Med-Tech, Inc., St. Joseph, Mo.
****Vetafil Heavy 40mm, Dr. S. Jackson, Washington, D.C.

diameter of the urethra (Figure 2). A catheter is then inserted in the urethra and the urethra is incised dorsally along the posterior midline of the penis for approximately one inch (Figures 3 and 4). Unless ligated, a small artery buried in the corpus cavernosum on the caudal aspect of the penis frequently causes hemorrhage for several days after surgery. To accomplish this we found it easiest to insert a catheter in the urethra and pass a No. 40 Vetafil suture through a 1/4 inch segment of the corpus cavernosum urethra, taking care not to include the mucosa of the urethra. This suture will ligate the vessel and prevent hemorrhage from this area (Figure 5).

The catheter is then removed and simple interrupted stitches are placed through the skin, penis and urethra on both sides of the incision using No. 40 Vetafil placing the sutures about 1/4 inch apart (Figure 5). The urethra is pulled up as close to the edge of the skin incision as possible. We have had some problems with one of the bulls with granulation tissue blocking the urethral opening, so I think it is wise to establish as wide a urethral opening as possible.

The penis is now replaced in the incision and attached at both the ventral and dorsal commissures. At the ventral commissure, using No. 40 Vetafil, the stitch is passed through the skin 1/2 inch from the edge of one side through the tunica albuginea of the penis and up through the skin on the other side 1/2 inch from the edge. The stitch is then passed through the skin 1/4 inch from the edge on this same side and up through the skin on the opposite side 1/4 inch from the edge. The skin is pulled together and tied (Figure 6).

The stitch at the dorsal commissure of the incision is passed through the skin 1/2 inch from the edge of the incision through the penis on the anterior surface, but not through the urethra, up through the skin 1/2 inch from the edge, back through the skin 1/4 inch from the edge and up through the skin on the other side (Figure 6). The suture is pulled tightly and tied. The remaining incision is closed with simple interrupted sutures.

A piece of soft plastic tubing four inches long and 3/8 O.D. is placed in the urethra, leaving about 1/3 of an inch protruding from the incision (Figure

7).***** We obtained this tubing from the Badger Medical Supply in Madison, Wisconsin. I am sure you could obtain it from a medical supply house in your area. Two small stay sutures are placed through the end of the tubing and into the skin to keep it in place. Before placing the tube in the urethra we found it advisable to wipe the blood from the urethra and surrounding area to prevent the pushing of a blood clot up to the urethra and occluding the plastic tube.

An examination of the prepuce should be made at a convenient time, for on one of the surgeries we did we found some excessive tissue torn loose from the penis and it had prolapsed out of the end of the prepuce.

Aftercare consisted of fly infestation, topical antibiotic ointment and powders of your choice and systemic antibiotic for four to five days. The bull should be watched to make sure he is able to urinate for a blood clot may occlude the tube. We had a problem with one of the bulls we did in which he forced the plastic tube out of the urethra. We put in a tube of about seven inches and sutured it in place. About four days later he had this tube forced out also. The owner reported he had noticed the tube having an "S" curve in it in about three days but did nothing about it. In both cases we noticed a blood clot in the end of the tube. If the clot restricted the flow of urine causing excessive straining or if there is another cause, I'm not sure. But you may want to advise the owner to watch for this problem and make necessary corrections.

The plastic tube is removed in seven to ten days. The bull should not be used as a teaser for six weeks for the tunica albuginea heals rather slowly and if the bull is sexually stimulated it may cause severe hemorrhage.

The first three bulls were done in April of this year and used this spring and summer. They all worked quite well and the only problem we had was the granulating in of the urethral opening on one of the bulls. Of the three bulls, two of them worked well all season, but the third showed some lack of interest toward fall. It is reported that a bull should work for one to two years and would have to be replaced at this time.

*****Badger Medical Supply, 702 S. Park St., Madison, Wisc.

