Characterization, surgical repair, and outcomes of acquired scrotal hernias in bulls

Pablo Jarrin Yepez,[a] J.L. Klabnik-Bradford,[a] J. Lozier,[b] A. Niehaus,[b] P-Y. Mulon,[a] M. Miesner,[c] T.M. Prado[a] D.E. Anderson[a]

[a]College of Veterinary Medicine, University of Tennessee, Knoxville, TN; [b]College of Veterinary Medicine, Ohio State University, Columbus, OH; [c]College of Veterinary Medicine, Kansas State University, Manhattan, KS

Based on the limited research regarding scrotal hernia repairs in bulls,[1-2] the main objective of this retrospective study was to evaluate the success of surgical repair in cases of bovine scrotal hernia. Exclusion criteria included congenital hernias and bulls younger than two years of age. Compilation of 13 medical records from 3 veterinary teaching hospitals was performed. Information gathered included: history; breed; diagnosis; side of the hernia; surgical procedure; complications before, during, and post-surgery; follow-up including return to reproductive performance; and re-herniation. Particular information from the surgical procedure consisted of the type of suture material used, the size of suture used, if mesh was incorporated, and if the testis of the affected side was removed. Out of 13 cases, 7 breeds were represented. The majority of cases were Hereford consisting of 7/13 cases (54%), 4 were Polled, 2 were Horned and 1 was not recorded. Overall breeds included Aberdeen-Angus (2/13=15%), Limousin (1/13=7.7%), Simmental (1/13=7.7%), Maine Anjou (1/13=7.7%), and Brangus (1/13=7.7%). The mean age was 3.5 years (range: 2-6 years old). All cases presented with a hernia of the left side. Surgical closure of the inguinal ring included #5-polyester (12/13=69%) or #2-polyester (1/13=7.7%) closure in interrupted and/or cruciate pattern. In 2/13(15%) cases polypropylene mesh was incorporated into the closure initially. In one case of re-herniation, a second repair was performed utilizing mesh. For all surgical repairs with mesh, #5-polyester was the suture used. The testis on the ipsilateral side of the hernia was removed in 2/13 cases (15.4%). Postsurgical complications were observed in 6/13(26.1%) cases. Post-operative complications included excessive scrotal swelling (3/13= 23.1%), radial nerve paralysis (1/13=7.7%) and re-herniation (3/13=23%). Re-herniation only occurred in cases in which the testis was spared initially; these bulls re-herniated 4 days, 5 days, and 1 year after the repair. Follow-up was unavailable in 5 of 13 cases. Of the 8 remaining cases, all had the ipsilateral testis spared and per the owners 7 (88%) had successful return to reproductive performance. From this limited amount of information, hernia repair in bulls results in excellent prognosis for life and good prognosis for return to reproductive performance.

Keywords: Scrotal hernia, scrotal tarsorrhaphy, bull

References

1. Ivany JM, Anderson DE, Ayars WH, et al: Diagnosis, surgical treatment, and performance after unilateral castration in breeding bulls: 21 cases (1989-1999). J Am Vet Med Assoc 2002;220:1198-1202.
2. Brouwers EAG, Sloet van Oldruitenborgh-Oosterbaan MM, Keg PR: Hernia inguinalis et scrotalis in the bull. Tijdschr Diergeneeskd 1996;121:2-5.