Ultrasound Features of Equine Arytenoid Chondritis in Thoroughbred Horses

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As assessed ultrasonographically, chondritic arytenoid cartilages are increased in size and have abnormal echogenicity and contour. Authors' addresses: Rood and Riddle Equine Hospital, PO Box 12070, Lexington, KY 40580 (Garrett, Embertson, Woodie); and Department of Clinical Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853 (Cheetham); e-mail: kgarrett@roodandriddle.com. *Corresponding and presenting author. © 2012 AAEP.

1. Introduction
Ultrasonography has potential value for the diagnosis of arytenoid chondritis (AC), but specific ultrasonographic parameters have not been defined. Our goal was to compare ultrasonographic findings of the arytenoid cartilages in horses with endoscopically diagnosed AC with ultrasonographic findings of the arytenoid cartilage in normal horses. We hypothesized that arytenoid cartilages with AC would have a larger cross-sectional area, an irregular margin, and abnormal echogenicity as compared with normal arytenoid cartilages.

2. Materials and Methods
Ultrasound images of the larynx in the dorsal and transverse planes were obtained at the level of the arytenoid cartilages in case horses (endoscopically diagnosed AC) and control horses (normal arytenoid cartilage structure and function). Information obtained from the ultrasound examination included arytenoid cartilage cross-sectional area, length of mineralization of the arytenoid cartilage, arytenoid cartilage echogenicity, and arytenoid cartilage shape. Comparisons were performed between case and control horses. For horses with multiple examinations, relationships between time point and arytenoid cartilage cross-sectional area were determined.

3. Results
Chondritic arytenoid cartilages were significantly larger and had abnormal shape and echogenicity when compared with normal arytenoid cartilages when assessed ultrasonographically. No difference in mineralization length was seen between groups. For horses with multiple examinations, no significant changes were identified over time in arytenoid cartilage size.

4. Discussion
Ultrasonography is a valuable diagnostic modality when investigating cases of possible arytenoid chondritis or abnormal arytenoid cartilage movement.