Comparison of Transrectal and Abdominal Transducers in Identification of Pathology in Horses Presenting with Colic

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Compared with a low-frequency (abdominal) transducer, a high-frequency linear (transrectal) transducer can be used to identify all common lesions found using fast localized abdominal sonography of horses (FLASH) admitted for colic, except for identification of the stomach and left kidney. Authors’ addresses: Department of Surgery and Anæsthesiology of Domestic Animals, Ghent University, Salisburylaan 133, Merelbeke, Belgium (Haardt); Department of Veterinary Clinical and Diagnostic Sciences, Faculty of Veterinary Medicine, University of Calgary, Calgary, AB T2N 4Z6, Canada (Romero, Boysen, Tan); e-mails: haardt.hanna@gmail.com, Hanna.Haardt@UGent.be. *Corresponding and presenting author. © 2021 AAEP.

1. Introduction
Abdominal ultrasonography is a valuable tool in diagnosis of abnormalities causing colic. Shortened protocols such as FLASH enable practitioners with little experience to perform an ultrasonographic examination in an emergency. However, most practitioners do not own an abdominal transducer to perform such an examination, while they commonly possess transrectal transducers for reproductive exams. The purpose of this study is to compare identification of abnormalities using a transrectal and abdominal transducer for transcutaneous abdominal scans of horses presenting with colic.

2. Materials and Methods
Twenty-four adult horses undergoing FLASH for investigation of colic were included in the study. The same clinician performed the ultrasonographic examination with the transrectal transducer in all patients, whereas examination with the abdominal transducer was performed by another clinician. Using a Chi square, Fisher’s exact, or Wilcoxon tests, the incidence of identification of each abnormality was compared between both transducers.

3. Results and Discussion
The transrectal transducer achieves comparable identification rates with the abdominal transducer for all abnormalities found on FLASH presenting for colic, except those affecting the left kidney and stomach. Although not statistically significant, thickening of the colon wall was detected more frequently with the transrectal transducer. A main

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NOTES
limitation was that the images were captured by ultrasonographers with limited experience, which may have led to artificially low identification rates of pathologies.

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Declaration of Ethics
The Authors have adhered to the Principles of Veterinary Medical Ethics of the AVMA.

Conflict of Interest
The Authors have no conflicts of interest.