

Ultrasonographic Diagnosis of Sharp Foreign Body Syndrome in Buffaloes

A thesis presented by
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(Surgery, Anesthesiology & Radiology)

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Abstract

Ultrasonographic examination was performed on 20 apparently healthy buffaloes along with 85 buffaloes suffered from hardware disease. In healthy buffaloes, reticulum appeared as a half-moon shaped structure in 85 % and crescent shaped in 15 %, with smooth contour. Thickness of the reticular wall and the distance between reticulum and abdominal wall were ($0.45 \pm 0.07\text{cm}$) and ($1.7 \pm 0.5\text{cm}$). Reticular contractions were (4.95 ± 0.15) biphasic contractions /5 minutes.

The contraction period of first and second contractions were (2.00 ± 0.12 and 3.90 ± 0.22 /second). The amplitude of first and second contractions were (5.46 ± 0.32 and 17.67 ± 0.32 cm). Moreover, the relaxation period between two biphasic reticular contractions was (60 ± 1.8 / second). The reticulum was imaged from the ventral aspect of the abdomen as well as to the left and right lateral side up to the level of the elbow over the 6th and 7th intercostal spaces in all examined buffaloes. Abomasum and craniodorsal blind sac of rumen were seen behind the reticulum at ventral midline view. Lung, spleen, and rumen were seen adjacent to the reticulum from the left side while lung, omasum and liver were seen adjacent to the reticulum from right side view. Reticular wall, distance between reticulum and abdominal wall and relaxation period in hardware diseased buffaloes were significantly increased ($P \leq 0.05$) while the reticular motility and the amplitude of contraction were significantly decreased ($P \leq 0.05$) when compared with healthy one. The interesting result was presence of foreign body as a hyperechogenic structure with comet tail artifact in 34 diseased buffaloes. Various complications of hardware disease including traumatic pleuropneumonia, thoracic and abdominal abscesses, traumatic pericarditis, local and diffuse peritonitis, and diaphragmatic hernia were recorded by ultrasound in the examined buffaloes. In conclusion, ultrasonography is a reliable technique to describe the features of reticulum and neighboring organs in healthy and hardware diseased buffaloes.

DEDICATION

This work is dedicated.

To the spirit of my mother,

To my father,

To my wife,

And to all my family.

ACKNOWLEDGMENT

First of all, I would like to thank **ALLAH** for helping me to carry out this work and all work throughout my life. I cannot find enough words to express my deep feeling toward my supervisors for their great guidance for this study.

My deepest gratitude and appreciation to **Prof. Dr. Mohamed Barakat Mostafa**, for his supervision, continuous help and encouragement.

Prof. Dr. Ashraf Mohamed Abdel Rahman Abu-Seida, Professor of Surgery, Anesthesiology and Radiology, Faculty of Veterinary Medicine, Cairo University for his kind guidance, continuous help and encouragement

Dr. Ahmed Mohamed Abdelaal, Assistant Professor of Animal, Medicine, Faculty of Veterinary Medicine, Zagazig University for his kind supervision and help

Dr. Salah Fadhil Abbas, General Director, Veterinary Directorate, Ministry of Agriculture, Iraq for his help during this study.

I want also to thank all staff members at the department of Surgery, Anesthesiology and Radiology, Faculty of Veterinary Medicine, Cairo University.

Also I want to thank all staff members at the departments of Animal Medicine, and Surgery, Anesthesiology and Radiology, Faculty of Veterinary Medicine, Zagazig University.

THANKS TO ALL

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