

MRI Provides First Description of the Anatomy of Dogs Cranial Nerves

Anatomy of Dogs Cranial Nerves May Help Earlier Recognition of Inflammatory and Neoplastic Diseases.

Researchers say they have published the first description of the anatomy of a dogs cranial nerves through magnetic resonance imaging, a non-invasive diagnostic tool that produces images of internal organs or structures. Detailing the nerves, a once difficult procedure, is now possible by using MRI, according to the researchers of the study, published in the recent *Veterinary Radiology and Ultrasound* journal.

By knowing the normal MRI anatomy of cranial nerve emergences in the dog, the clinician will better recognize lesions affecting those nerves, such as inflammatory or neoplastic diseases, thus allowing earlier recognition of the disease, says lead researcher Laurent Couturier.

The study reviewed 22 MRI brain studies of various dog breeds to determine which cranial nerves could be seen, and then assessed the origins of those nerves and associated small openings in the skull.

Additionally, a computed tomography study of a separate, isolated skull was performed to determine cranial nerve exit. This facilitated recognition of the course of cranial nerves when exiting the skull on MRI images.

Cranial nerves are difficult to identify because of their small size and their specific course through bony structures, say the researchers. As cranial nerves are small and thin structures of the nervous system, a really precise imaging modality had to be used, and only MRI could give such results on nervous tissue.

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