Veterinary MRI and RT Center of New Jersey

VETERINARY MRI + RADIOTHERAPY CENTER OF NEW JERSEY

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Case Report #8

Atypical Presentation of Brain Mass

MRI is a valuable tool for evaluating cord parenchyma and is the preferred means of evaluating the brain.

Spinal cord edema or syrinx formation may be secondary to an intracranial mass lesion and is an indication for brain imaging.

Case Summary: A 6yr male Bernese Mountain Dog was presented for an MRI scan of the neck to find a cause for neck pain. Patient was recently treated for an ear infection, vomiting, and some trouble breathing. Patient was minimally responsive to steroid treatment and was receiving antibiotics, antacids and sucralfate at the time of the scan. Physical exam and bloodwork revealed no significant findings.

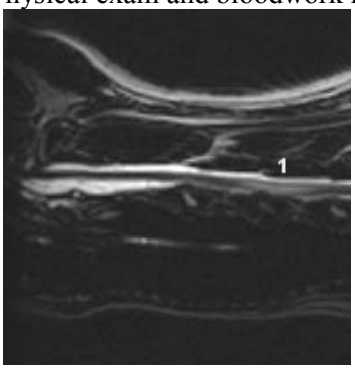

Fig 1: Sagittal T2W myelo image of cervical spinal cord showing edema/syrinx at C2-3.

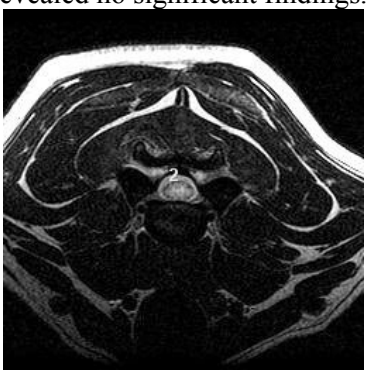

Fig 2: Axial T2W image showing cord edema/syrinx at the level of C3.

Fig 3: Axial post contrast T1W image of the brain showing contrast enhancing mass.

Findings: There was marked increased signal intensity in the mid cervical and cranial thoracic spinal cord on T2W images with concurrent mild cord swelling and lack of any contrast enhancement, consistent with cord edema. There was no evidence of significant disc herniation or protrusion. No mass lesion was evident in the spinal or paraspinal tissues. The cord lesion was suggestive of an intracranial mass altering CSF flow in the spinal canal.

Brain imaging was performed to evaluate an intracranial mass-effect to explain the spinal edema/syrinx. Imaging revealed markedly dilated lateral ventricles with a high signal intensity irregularly shaped mass lesion arising to the right of midline in the area of the choroid plexus extending into the lumen of the lateral ventricles. The caudal ventral margin of the cerebellum was coned, bulging caudally compressing the subarachnoid space at the level of the foramen magnum and blocking normal CSF flow.

Imaging Diagnosis: Findings consistent with an intra-axial intraventricular mass lesion causing severe hydrocephalus, increased intracranial volume and secondary acquired Chiari-type effect (cord edema/early syrinx development) involving the cervical and cranial thoracic spinal cord. The brain tumor is most likely a choroid plexus papilloma or ependymoma, based on the location and signal pattern on the various MRI sequences, but a histiocytic sarcoma is also a consideration given the breed.

Outcome: No further information was available on this patient at the time of this report. Treatment of choice for this case would be external beam radiotherapy (RT). This would typically require a radiation dose of 54Gy split into 18 fractions (treatments) of 3Gy. A survival time of approximately one year is estimated with therapy.

Please do not hesitate to contact our facility to discuss the value of a CT or MRI

study for a particular patient prior to requesting an imaging study.
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