Suspected trigeminal peripheral nerve sheath tumor in a 3-year-old dog – MRI findings and radiotherapy

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Introduction

Peripheral nerve sheath tumors (PNST) are quite uncommon in dogs, especially young. 3-year-old Leonberger was presented with unilateral atrophy of a left temporal muscle, concomitant left corneal hypoesthesia and mild jaw pain. Masticatory muscle myositis was suspected, but no improvement was seen after routine treatment. Head MRI was performed and suspected PNST of the trigeminal nerve was diagnosed, followed by radiotherapy.

Materials & Methods

The MRI examinations were conducted using a 1.5T superconductive whole body MRI. Volumetric Modulated Arc Radiotherapy (VMAT) was planned with Monte Carlo algorithm and the CMS Monaco 5.0 treatment planning system. The RT prescription was 37 Gy in five fractions.

Results

The imaging characteristics were consistent with an extra-axial nodular lesion with sharp and regular margins, located at the cerebello-pontine angle involving the intracranial potion of the trigeminal nerve and the proximal portion of the mandibular branch of the nerve. The tumor was hyperintense in T2-weighted pulse sequences and homogeneously contrast enhancing. Mild atrophy of ipsilateral temporal muscle was visible. At the first follow up examination the dog was ameliorated, the tumor volume was stable/reduced (%) and no adverse effects were recorded.

Conclusion

Even in young dogs, intracranial PNST should be considered as a differential diagnosis for clinical signs related to masticatory muscles.





