Teleneurology report

Date: [redacted]
Referring veterinary surgeon: [redacted] **Hospital:** [redacted]
Email address: [redacted]
Patient name and surname: [redacted]
Species (canine/feline): Canine **Breed:** Toy breed **Age:** 1yrs **Sex:** ME
Body areas scanned and charged: HEAD **Service required:** Standard 1-3 days

Relevant clinical history, clinical findings and diagnostic test results:

On 10/25/2019, [redacted] was presented because he became suddently lethargic, with spontaneous scream all day long. The previous vet suspecting an IVDE gave him SAI + painkillers but the dog was slowly worsening. On presentation, mentation was inappropriate, with a ventroflexion of the neck, right head turned and he was circling to the left and we did observe a hypermetric gait of the front limbs. Rest of the neuro exam was completely normal. CBC/Chem was unremarkable. A CSF tap (L5-L6) was performed and revealed a proteins level at 0.29 g/L and 3 cells: 1 macrophage, 2 lymphocytes. But the dog did received SAI previously to the CSF tap analysis.

Report

Thank you for submitting this MR study of the brain on [redacted].

Main findings

There is evidence of multifocal disease process with the presence of two fairly well-defined homogeneous T2W and T2-FLAIR hyperintense intra-axial lesions affecting the left midbrain (and median part of the right midbrain) as well as right pontine region (images 1 to 3). These lesions are isointense on T1W and showing very faint heterogeneous contrast uptake. They are both associated with mild mass effect and subtle midline shift.

Conclusion & recommendations

The above MR study of the brain reveals multifocal disease process with main differentials being meningoencephalitis of unknown origin (MUO), infectious meningo-encephalitis or CNS lymphoma. If not done already, I would recommend serology for Neospora caninum and Toxoplasma IgM/IgG. In case of negative (or low positive) results, the pragmatic approach would be to treat this dog for MUO since there is no further test to distinguish it from CNS lymphoma and that condition would be the one with the better prognosis out of the two remaining differentials.

In term of treatment of suspected MUO, I personally use combination of immuno-suppressive dose of prednisolone (starting 1 mg/kg q12hrs PO for at least 2 weeks – even if this dog has already been started on corticosteroids) and cytarabine as the standard treatment for suspected immune-mediated meningo-encephalitis. We have recently

published a study showing that giving at the onset of treatment cytarabine via continuous rate intraveinous infusion (200 mg/m2 for 6 to 8 hours) given at the onset of treatment offers better control of the disease than conventional intermittent subcutaneous administration.

Decision to taper prednisolone is made on clinical ground initially. I aim to have resolution of neurological signs within 2 to 3 weeks before starting reducing every two weeks very slowly prednisolone over minimum 3 months period and until re-evaluation (see below). If you cannot achieve resolution of neurological signs after three weeks then I would definitely consider adding another immune-suppressive drug (cyclosporine or leflunomide). When you have rule-out infectious causes, it would be reasonable to start straight away on cytarabine (best by CRI administration) in addition to prednisolone 1 mg/kg q.12hrs PO and then start reducing prednisolone after two weeks depending on response. Cytarabine can then be continued using conventional intermittent subcutaneous administrations (four injection of 50 mg/m_2 s/c given other 2 consecutive days and that repeated initially every 3 weeks for 4 cycles then every 4 weeks for 4 cycles then every 5 weeks for 4 cycles depending on response). In term of monitoring and prognosis, we advise on our patient repeating neurological examination at 3 months and if normal then consider repeat MRI and CSF. As a general rule of thumb and when using prednisolone combined with cytarabine, 2/3 of dogs with suspected MUO will do well long-term (either being able to be taken completely off treatment after 6 months or being in clinical remission on low dose of prednisolone and cytarabine s/c injection cycles every 6 weeks) while 1/3 of dogs will not do well (either deteriorating quickly after initiating treatment or relapsing whenever immune-suppressive treatment is reduced).

I hope this report is helpful. Do not hesitate to contact me if I can be of any further help.

Best regards

Laurent Garosi
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RCVS & EBVS® European Specialist in Veterinary Neurology

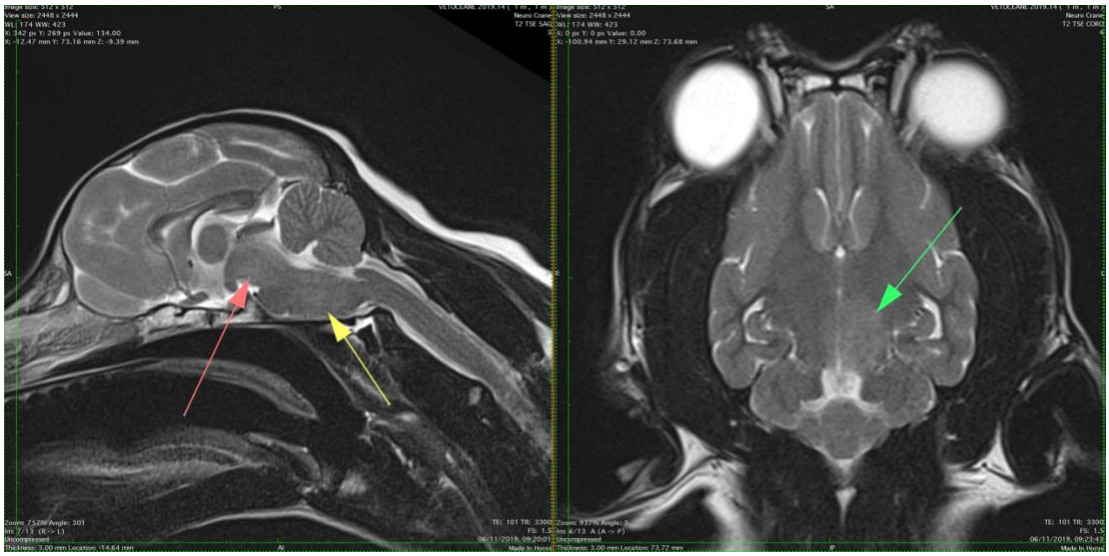

Image 1 – Sag (left) and Dors (right) T2W brain

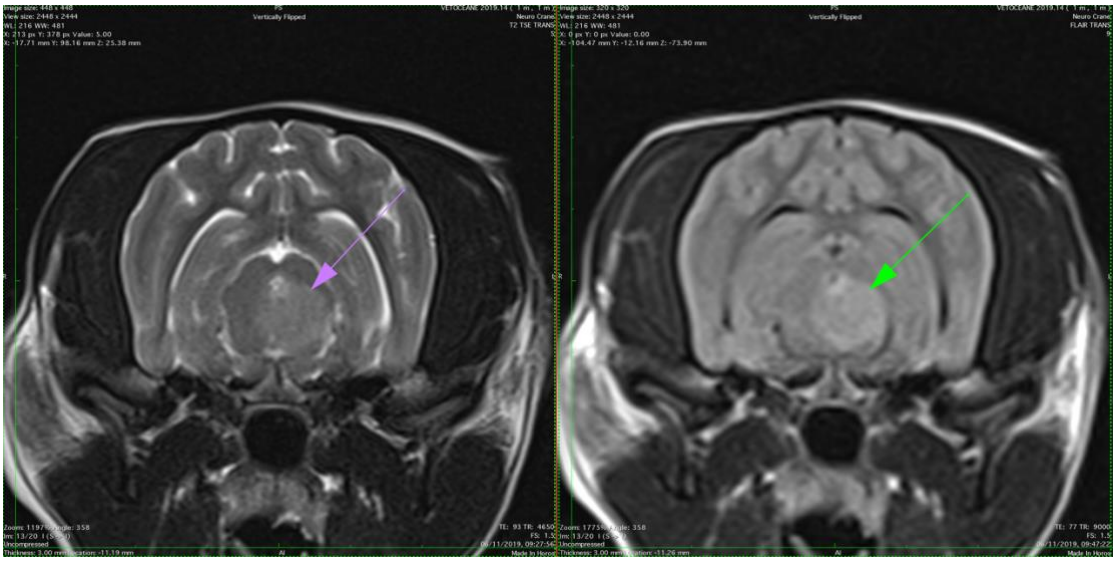

Image 2 – Trv T2W (left) and T2-FLAIR (right) rostral colliculi

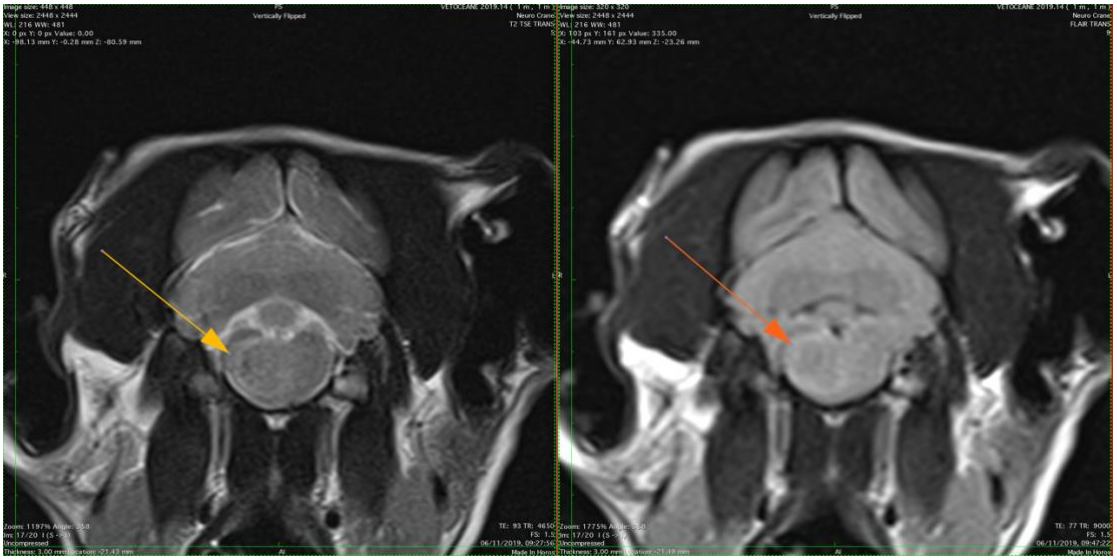

Image 3 – Trv T2W (left) and T2-FLAIR (right) pons