

Unusual findings in a canine cerebrospinal fluid

Francesco Cian, Viktor Palus, Giunio Bruto Cherubini, Joy Archer, Elisabeth Villiers

Dick White Referrals, Six Mile Bottom, UK

Department of Veterinary Medicine, University of Cambridge, UK

Signalment:

Dog, English Springer Spaniel, 8 years old, female neutered.

History:

The dog was presented as an emergency for investigation of progressive all four limb ataxia, staggering and behavioural change. Neurological symptoms started two weeks before referral with acute deterioration two days before. The dog had a solid mammary carcinoma surgically removed one year before, which recurred 6 months later and was also removed. Besides this, the patient had no other previous major medical or surgical problems.

Clinical findings:

On physical examination the dog was tachypneic and mucous membranes were hyperemic. The dog was obtunded, non-ambulatory tetraparetic with decreased postural reactions and increased spinal cord segmental reflexes in all four limbs. It also had obvious cervical hyperesthesia.

Diagnostic procedures:

Haematology, biochemistry, electrolytes and urinalysis were unremarkable. Thoracic radiographs revealed a diffuse mild broncho-interstitial lung pattern. Abdominal ultrasound revealed one small liver nodule which was sampled for cytology and was characterized by the presence of well differentiated hepatocytes with mild vacuolar cytoplasmic changes.

Magnetic resonance imaging revealed a mass lesion that was hyperintense on the T2-weighted and fluid FLAIR (fluid-attenuated inversion recovery) images with the perilesional oedema in the left temporal lobe. The mass was enhanced after contrast administration.

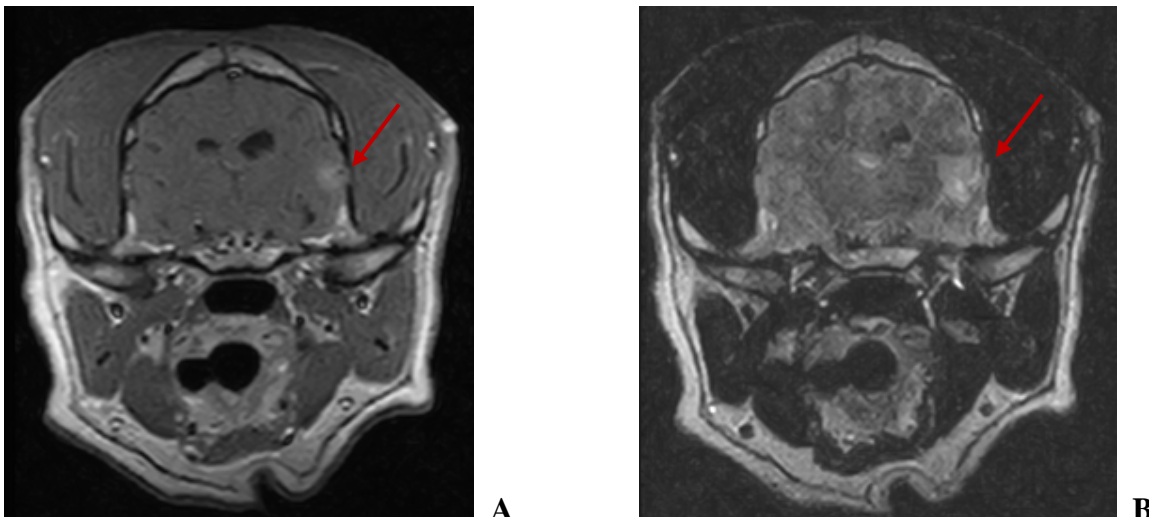


Fig.1A MRI, T1-weighted image after contrast administration, focal contrast enhancing lesion in the left temporal lobe (red arrow).

Fig. 1B MRI, FLAIR image, hyperintense lesion in the left temporal lobe (red arrow), mild perilesional hyperintensity suggesting perilesional oedema.

A CSF TAP was performed and the results are shown in the table and photomicrographs below.

CSF analysis:

	Values	Reference intervals
Appearance	Clear, colourless	
Nucleated cells (c/μL)	30	0-6
Red blood cells (c/μL)	90	0
Total protein (g/L)	0.25	0.14-0.30



Fig.2 Cytospin preparation of CSF, May-Grunwals Giemsa stained, x50

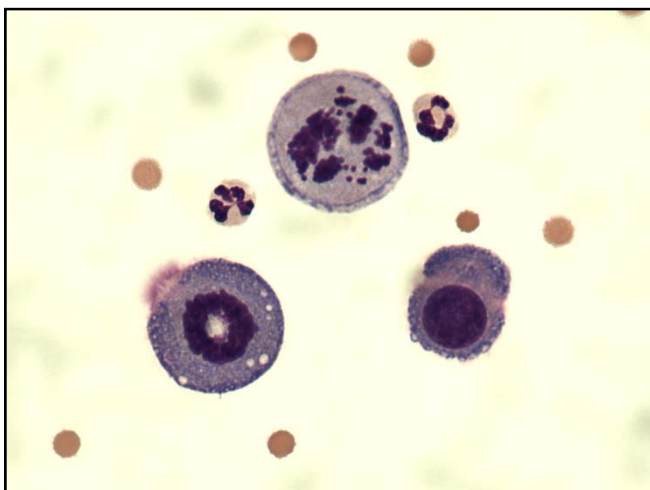


Fig. 3 Cytospin preparation of CSF, May-Grunwals Giemsa stained, x100

Questions:

1. What are your main differential diagnoses?
2. Which further tests would you suggest to confirm your diagnosis?