Oral presentations

Incidence of neuro-ophthalmological abnormalities in neurological diseases of dogs and cats: a retrospective study of 114 cases (2010–2015)

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OBJECTIVE

Neuro-ophthalmological abnormalities (blindness, miosis, mydriasis, anisocoria, Horner's syndrome, strabismus and nystagmus) appear frequently in dogs and cats admitted with neurological disease. This study reports the incidence of neuro-ophthalmological abnormalities in 99 dogs and 15 cats with neurological disease, along with correlation with the commonest final diagnoses.

METHODS

The study population consisted of dogs and cats admitted with neurologic signs and at least one neuro-ophthalmological sign. Inclusion criteria were history, clinical and neurological examination, neuroanatomic and aetiological diagnosis. Descriptive statistics were used.

RESULTS

The most frequent presenting complaints were head tilt (22/99) and paresis/paralysis (22/99) in dogs and head tilt (3/15) and ataxia (3/15) in cats. The most common neuro-ophthalmological abnormalities were strabismus (55/99) in dogs and anisocoria (7/15) in cats. The localization of lesions was found to be multifocal (38/99), and focal, in the vestibular system (37/99) in dogs, whilst in cats it was solely multifocal (6/15). An aetiological diagnosis was reached only in 48 dogs and 10 cats; the former were mainly diagnosed with distemper encephalitis (10/48) and congenital hydrocephalus (6/48) and the latter mostly with encephalitis (5/10).

STATEMENT

Neuro-ophthalmological abnormalities may be misinterpreted by concurrent extra-neural, ocular signs or stress reflex reactions that may hamper diagnosis. Consequently, neuro-ophthalmological examination and correlation with neurological signs is important for the neuroanatomic diagnosis, severity assessment and prognosis of the respected diseases. As shown, neuro-ophthalmological cases reached a 18.24% of the total neurologic case load admitted during a five-year period; therefore, represent a significant number of cases, which should not be ignored.

Secretome analysis of olfactory ensheathing cells – exploring their role in functional recovery from spinal cord injury in dogs

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OBJECTIVES

Spinal cord transplantation of mucosa olfactory ensheathing cells (OECs) improves locomotion in 25% of dogs. OECs from dogs who respond to transplantation might

have properties that distinguish them from those of dogs who do not respond. Therefore, our objective was to compare the secretome of OECs from 'responder' versus 'non-responder' cases.

METHODS

We used OECs maintained frozen in a cell bank constituted during a clinical trial testing OECs efficacy (with ethical permission). We compared the secretome of OECs from 3 'responder' versus 3 'non-responder' dogs.

Cells were cultured and their media analyzed by liquid chromatography-mass spectrometry. Detected proteins in 'responders' versus 'non-responders' were compared using peptide spectral match scores as an estimate of protein abundance in each sample. Any protein 1.5 times more abundant and having a role in neural regeneration was retained for fluorescence immunocytochemistry and western blotting.

RESULTS

Three 'relevant' proteins were more abundant in 'responders': hnRNPa2 (involved in myelination), CRMP4