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

(involved in axonal guidance) and heat shock protein HSP70 (protecting cells from stress).

Western blot confirmed presence of these proteins in all 6 samples analysed. However, there was no difference in protein density between 'responders' and 'non-responders'.

OEC immunocytochemistry revealed strong hnRNPa2 nuclear labeling and moderate CRMP4 and HSP70 cytoplasmic labeling.

STATEMENT

We have identified three proteins involved in neural function that might play a role in OEC transplant efficacy. Further work is needed to validate these preliminary findings but this suggests that genetically modifying OECs to over-express these proteins could enhance their efficacy.

A comparison of survival for Granulomatous Meningoencephalomyelitis (GME) following treatment with either Cytosine Arabinoside or Lomustine in combination with corticosteroids in dogs

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OBJECTIVES

To compare survival for Granulomatous Meningoencephalomyelitis (GME) in dogs following treatment with corticosteroids in combination with either Cytosine Arabinoside or Lomustine

METHODS

A retrospective analysis was undertaken of cases of GME treated in 2 clinics between 2009 and 2015 with either cytosine arabinoside and prednisolone combination therapy or lomustine and dexamethasone combination therapy. Diagnosis of GME was made on a combination of focal or multifocal neurological signs with MRI lesions consistent with GME or cerebrospinal fluid changes of pleocytosis or increased protein. Initial therapy was either with Cytosine arabinoside 200mg/m² divided over 48 hours, repeated once after 3 weeks or lomustine 60–80 mg/m² single dose. In cases of recurrence, a further dose of the initial drug was used. Kaplan Meier survival analysis was performed.

RESULTS

71 cases were treated with cytosine arabinoside and 92 with lomustine. Kaplan Meier analysis showed a similar trend for both cohorts except in the period of day 100–600, where the lomustine treatment protocol has a lower survival percentage than the cytosine arabinoside protocol. There was no statistical significance between the survival data using log rank tests. In both cohorts the number of surviving patients was greater than the number of fatalities. Median survival rate for cytosine arabinoside treated cases was 1349 days and Lomustine remained undefined as 50% of the patients were still alive at the end point of the study.

STATEMENT

The clinical outcome was not different between the two treatment protocols and longer than those in the published literature for cytosine arabinoside.

Drug compliance in canine epilepsy

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OBJECTIVES

Inadequate compliance has been identified in human medicine as a major cause of treatment failure and increased seizure frequency. The aim of this study was to find the level of owner compliance in treatment of canine epilepsy patients and to identify factors that could lead to reduced compliance.

METHODS

Ninety-four cases were obtained from three first opinion, small animal practices in the UK. For inclusion in the

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