The stability of NT-proBNP in feline urine

**Liat Kelin, David J Connolly,
Julia Sargent, Karen Humm**

Royal Veterinary College, Hertfordshire, UK

OBJECTIVE

To determine the stability of feline urinary amino terminal pro B-type natriuretic peptide (NT-pro BNP) at room temperature over a time period of 72 hours.

METHODS

Urine samples were collected from three cats diagnosed with cardiac disease at the Queen Mother Hospital for Animals. The samples were frozen at -25°C prior to testing. Aliquots of urine were then removed from the freezer and kept at room temperature (between $17-22^{\circ}\text{C}$) for variable time periods (0, 6, 12, 24, 48 and 72 hours). Amino terminal pro B-type natriuretic peptide concentrations for each sample at each time point were measured at a commercial laboratory (IDEXX Laboratories) using a feline specific sandwich enzyme-linked immunosorbent assay (ELISA). Urinary NT-pro BNP concentrations for each of the time periods were then compared with the Friedman

test using a commercially available software programme (IBM SPSS Statistics 21) to investigate whether there was a statistical difference in the concentration of urinary NT-pro BNP over 72 hours. This study was approved by the ethics and welfare committee at the Royal Veterinary College and informed owner consent was obtained.

RESULTS

There was no statistically significant difference in the concentration of urinary NT-pro BNP at any time point ($p=0.101$).

CONCLUSIONS

Leaving feline urine samples at room temperature for up to 72 hours does not have a significant effect on the concentration of NT-pro BNP.

CLINICAL RELEVANCE

Urinary NT-proBNP concentration appears to remain stable over a time course equivalent to postal transportation of laboratory samples. Therefore, if feline urinary NT-proBNP is found to be a useful biomarker its stability at room temperature allows for simple transportation to a laboratory for analysis. Further work is required to confirm the stability of the cardiac biomarker in urine in a larger cat population in order to enhance the validity of these findings.

Feline meningoencephalomyelitis of unknown aetiology (FMUA): a retrospective analysis of 14 cases

**Sarah Spencer, Viktor Palus,
Salih Eminaga, Alberta De Stefani,
Giunio Bruto Cherubini**

Dick White Referrals, Cambridgeshire, UK, UK

BACKGROUND

Meningoencephalomyelitis of unknown aetiology (MUA) describes central nervous system inflammation without an identifiable infectious cause or histopathological diagnosis. While canine MUA is well reported, there are few reports of feline MUA, and treatment protocols and prognostic information are lacking.

OBJECTIVES

To describe the signalment, clinical signs, magnetic resonance (MR) findings, ancillary diagnostic tests, cerebrospinal fluid (CSF) analysis, treatment and outcome of FMUA.

METHODS

Medical records of cats (2008–2014) that met a strict inclusion

criteria of cerebrospinal fluid (CSF) pleocytosis, negative CSF realtime-PCR infectious disease results and characteristic MR, were retrospectively reviewed.

RESULTS

Fourteen cats were included. Mean age was 4.8 years (10 months–12 years). No sex or breed predilection existed. Common clinical signs included altered mental status (36%, 5/14), lethargy (29%, 4/14), generalised or partial seizures (29%, 4/14), pyrexia (21%, 3/14), nystagmus (21%, 3/14), hindlimb ataxia (21%, 3/14), paraparesis (21%, 3/14) and tetraparesis (14%, 2/14). Neuroanatomical localisation was multifocal in 50% (7/14), central in 14% (2/14), T3–L3 in 21% (3/14), C6–T2 in 7% (1/14) and L4–S2 in 7% (1/14) of cases. Leucocytosis was the most common abnormality on ancillary diagnostic testing (36%, 5/14). CSF nucleated cell count was <80 cells/ μL in 71% (10/14) of cats (median 38.5, 6–344); pleocytosis was mainly mixed (36%, 5/14), but was neutrophilic in 21% (3/14), lymphocytic in 21% (3/14), mononuclear in 14% (2/14), and eosinophilic in 7% (1/14) of cases. CSF protein was elevated in 83% (10/12) of cases (median 0.495g/L, 0.21–22.25).

MR of all cats showed single or multiple intraparenchymal lesions that were hyperintense on T2W and FLAIR sequences. Other findings included meningeal contrast enhancement (29%, 4/14) and mild cerebellar herniation (14%, 2/14). All cats were treated with a corticosteroid-based protocol (dexamethasone (71%, 10/14) or prednisolone (29%, 4/14)); additional therapies included lomustine (29%, 4/14), cytarabine

Delivered to:
Guest (guest)

IP: 3.85.73.92

On: Wed, 26 Apr 2023 06:38:44