

Scientific Report

Iron deficiency anemia and seizure in a kitten

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Summary

The aim of this article was to describe the clinical management of a case with seizure, possibly due to iron deficiency anaemia (IDA) in a kitten. A 38-day-old female European shorthair cat was presented with acute onset of impaired consciousness, seizures and lateralised upper motor neuron tetraparesis. Haematology results showed severe microcytic hypochromic anaemia with marked anisocytosis and thrombocytosis, while a low plasma iron concentration (<0.9 µmol/L) was the most remarkable biochemical alteration encountered. Iron deficiency anaemia was suspected and oral iron therapy was started together with supportive treatment. The cat responded to therapy and clinical signs started to improve on the second day and returned to normal eight days after referral to the clinic.

Key words: Cat, Iron deficiency anaemia, Seizure

Introduction

In cats, iron deficiency anaemia (IDA) has been well documented only in weanling kittens, in whom iron supplementation results in rapid resolution of the clinical and hematologic abnormalities. IDA is extremely rare in adult cats (Couto, 2009). IDA can occur in breastfeeding children as well (Collard, 2009) and it is characterized by microcytosis, hypochromasia and poorly regenerative anaemia. A few case reports note that seizure may also be induced by IDA in children (Daoud *et al.*, 2002; Hartfield *et al.*, 2009). Many different kinds of seizure etiology in cats have been published (Schriebl *et al.*, 2008; Pakozdy *et al.*, 2010) but, to the best of our knowledge, there have been no reports considering possible association between seizure and IDA in this species.

Case history

A 38-day-old female European shorthair

cat with a body weight of 510 g was presented at the clinic because of weakness and two acute generalized seizures for 2 min. The seizure was witnessed by the referring veterinarian and did not respond to intravenous glucose bolus (1 ml 50% glucose). This cat had been exclusively fed on maternal milk. The other littermate was already being fed by commercial cat food in addition to maternal milk and was healthy. Neurological examination revealed non-ambulatory tetraparesis, sleepiness, blindness and confusion. Moreover, the cat showed head turn, proprioception was severely decreased in all four limbs while spinal reflexes were normal. The kitten was hospitalized and treated with constant rate infusion of a balanced electrolyte solution (Ringer's solution, Fresenius Kabi, Graz, Austria) (2 ml/h IV). During treatments, the cat showed generalized seizure without hypoglycaemia (11 mmol/L). The seizure was successfully treated with midazolam (Gespag, Linz, Austria) (0.1 mg IV) but severe tetraparesis, confusion and blindness