



ISSN (E): 2277- 7695

ISSN (P): 2349-8242

NAAS Rating: 5.23

TPI 2021; 10(7): 367-368

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www.thepharmajournal.com

Received: 07-04-2021

Accepted: 19-05-2021

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Medical management of paracetamol toxicity in a cat: A case study

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Abstract

The case study is on medical management of a non descriptive cat affected with paracetamol toxicity. The diagnosis is based on the history by the owner and the clinical signs observed on examination. The animal was treated with N-acetyl cysteine at a dose of 140mg/Kg and supportive intravenous fluid therapy Ringers lactate at dose rate of 10mg/kg bodyweight. Owner was advised to give N acetyl cysteine orally for 2 days. The animal appeared normal after completion of treatment.

Keywords: Feline, paracetamol, toxicity, treatment

Introduction

Paracetamol (Acetaminophen) is a commonly available non steroidal anti-inflammatory drug which mediates its pharmacological action by inhibiting the cyclooxygenase (COX) enzyme. In liver it gets metabolized and eliminated by kidney ^[1]. Cats are more sensitive to paracetamol poisoning when given at a dose of 10mg/Kg ^[2]. The present case study deals with the successful medical management of a cat affected with paracetamol toxicity.

Case details

A 2 year old non descriptive queen cat was presented with the history of bloody urine after self medicated with paracetamol 600 mg tablet by the owner. On physical examination, animal appears dull and depressed with facial odema. On clinical examination, conjunctival mucous membrane appears pale with hyperthermia. Complete blood count revealed haemolytic anaemia. Based on the history and clinical signs, the cat was diagnosed with paracetamol toxicity.

Treatment and Discussion

The cat was treated with activated charcoal at the dose of 1g/kg body weight orally. Animal was initially treated with antidote N-acetyl cysteine @ the dose of 140 mg/kg along with intravenous infusion of ringers lactate solution at the dose of 10 ml /kg then animal was given with the oral tablet of N-acetyl cysteine at the dose of 70mg/kg body weight at interval of 6 hours for consecutive 2 days ^[3]. Animal was also advised with hematinic syrup as supportive therapy. After the completion of treatment protocol, animal appears apparently normal.

Paracetamol poisoning is common in dogs and cats owned in urban areas among educated owners. It was observed that cats are more sensitive to paracetamol poisoning than dogs. In liver, Paracetamol gets biotransformed into a non toxic metabolite via conjugation with glucuronic acid is the presence of glucuronyl transferase enzyme and gets eliminated by the kidney. The reason for cats are more sensitive to paracetamol is the absence of glucuronyl transferase enzyme ^[4, 5]. Treatment with N acetyl cysteine is found to be effective in most of the cases. N acetyl cysteine mediates its antidote function by decreasing the viscosity of secretions by splitting of disulphide bond in mucoproteins ^[2, 6].

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