Suspected transmission of mycobacterium xenopi to a domestic albino ferret from exposure to infected aquarium water

**Natasha Davendralingam²,
Nadene Stapleton¹, Vicki Baldrey¹,
Mark Stidworthy⁴, Laureen M Peters¹,
Indran Davagnanam³**

- 1 Beaumont Sainsbury Animal Hospital, Royal Veterinary College, London, UK
- 2 St Bartholomews Hospital, London, UK
- 3 National Hospital of Neurology and Neurosurgery (Queen Square), London, UK
- 4 International Zoo Veterinary Group Pathology, West Yorkshire, UK

INTRODUCTION

Mycobacterium xenopi more commonly infects reptiles, amphibians and marine life with water as its proven reservoir. It is very rare in ferrets. As the affected ferret was bred and kept in captivity, the infection would have been contracted from an external/environmental source.

OBJECTIVES

To identify the source of mycobacterium xenopi infection in a domestic albino ferret i.e. animal-animal, human-animal or environmentally-derived.

METHODS

1. Affected ferret: Presented with a 2-month history of weight loss, anorexia and malaise. The ferret underwent a clinical examination, x-rays, blood tests and lymph node biopsy. Due to poor prognosis and rapid deterioration, the ferret was euthanised. A post-mortem examination was conducted
2. Human contacts: The primary owners underwent full medical assessments with respiratory specialists. A detailed survey of 10 humans with recent contact with affected ferret was conducted
3. Companion ferrets: 4 ferrets sharing living-quarters underwent full veterinary assessment
4. Water analysis: Samples from aquarium sent for analysis (The affected ferret was the sole ferret with contact with water from this aquarium.)

RESULTS

1. Mycobacterium xenopi present in lungs (primarily), liver and spleen
2. No identifiable risk of human-ferret transmission
3. None affected
4. Awaiting sub-type confirmation from submitted samples

CONCLUSIONS

High suspicion of mycobacterium xenopi transmission through consumption/inhalation of infected aquarium water.

This is a unique collaboration between medical & veterinary doctors and pathologists to investigate a cause for infection which concluded with the rare (second ever recorded case) contraction of mycobacterium xenopi in a ferret through an unconventional mode of transmission; aquarium water.

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Aortic embolisation in two cats; is it always a matter of the heart?

**Lamprini Kalogianni¹, Dimitris Timiou¹,
Theodora K. Tsouloufi¹,
Nektarios Soubasis¹, Michail Patsikas¹,
Ioannis Panopoulos²,
Konstantina Theodorou¹, Dimitra Psalla¹,
Lina Tentoma³**

- 1 School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University of Thessaloniki, Thessaloniki, Greece
- 2 Private Practitioner, Athens, Greece
- 3 Private Practitioner, Thessaloniki, Greece

OBJECTIVES

To describe two feline cases with aortic embolisation and subsequent hindlimb paralysis due to a primary lung tumor.

METHODS

Cat 1 and Cat 2 were referred within four years. Both were domestic shorthairs, 12 and 15 years old, with lower motor neuron signs in both hindlimbs, bilateral absence of femoral pulses, hypothermia and cyanotic paw pads. Cat 1 had a 3d grade heart murmur. Peripheral affected

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limb venous glucose concentration was decreased compared to jugular vein glucose concentration and creatinine phosphokinase and D-dimers were increased in both cases. Lactic acid was increased in the hindlimb of Cat 2 compared to the jugular vein.

RESULTS

Both cats had unremarkable cardiac ultrasound and a pulmonary mass was suspected on radiographs and confirmed by computed tomography. CT angiography revealed aortic embolisation in both cases. Cat 1 was treated with enoxaparin and clopidogrel until accessory lung lobe excision, and the post mortem histopathologic diagnosis was adenosquamous cell carcinoma (iliac

arteries, accessory lung lobe). Cat 2 had a quadriceps muscle mass originating from the left femoral artery with a cytological diagnosis of reactive fibroplasia (muscle) and the post mortem histopathologic diagnosis confirmed bronchial adenocarcinoma (muscle, left femoral artery, left caudal lung, aortic bifurcation).

STATEMENT

Embolisation in peripheral limb arteries in cats is known to occur as lung-digit syndrome. Neoplastic emboli in the aortic bifurcation or the iliac arteries is a rare presentation with only two published cases confirmed by histopathology, however it should be considered in aged cats without evidence of cardiomyopathy.

Characterisation of canine parvovirus (CPV-2) circulating in the UK

Joanne Brewin¹, Elizabeth Graham^{3,2}, Janet Daly¹, Stephen Dunham¹

- 1 University of Nottingham, Nottingham, UK
- 2 University of Glasgow, Glasgow, UK
- 3 Cognosco, AnexaFVC, Morrinsville, New Zealand

OBJECTIVES

CPV-2 is a major pathogen of dogs, causing severe haemorrhagic diarrhoea and often death in young puppies. Despite widespread vaccination, the disease continues to occur regularly in small animal practice. Since CPV-2 first emerged in the late 1970s, it has evolved into 3 main antigenic subtypes: 2a, 2b and 2c, completely replacing the original type 2. This study determined which strains of CPV are currently circulating in a sample of dogs living throughout the UK.

METHODS

Thirty-four faecal samples were collected from dogs in the UK, which tested positive for parvovirus by SNAP test or diagnostic polymerase chain reaction (PCR). DNA was extracted from the samples, and approximately 400bp of the capsid protein VP2 was amplified by PCR and sequenced to determine the strain of CPV present.

RESULTS

The predominant strain found was CPV-2b (20/26). A single case of CPV-2c was found and 5/26 were CPV-2a. The last study to characterise CPV in the UK was published in 2008, and also found type 2b as the most common variant. Results from the current study suggest that CPV-2b is still the predominant type, and has not been overtaken by the newer type 2c.

STATEMENT

The current study suggests that CPV-2 in the UK has undergone relatively little change in the last decade. However, CPV continues to evolve and so continued surveillance of strains present in a region is necessary to determine current vaccination efficacy and detect emergence of new antigenic variants; such variants could be more pathogenic or resistant to current vaccines.

Clinical presentation of canine distemper virus infection in dogs in Brazil

Mary Marcondes, Karina Hirata, Jaqueline Azevedo, Wagner Ferreira

São Paulo State University, Araçatuba, São Paulo, Brazil

OBJECTIVES

Canine distemper virus (CDV) infection remains a prevalent disease of the dog in many countries. The aim of this study was to review retrospectively the signalment and clinical presentation of dogs with CDV infection presenting to a veterinary teaching hospital in Brazil.

METHODS

The medical records of 6,700 dogs (January 2014 to December 2015) were evaluated and 74 (1.1%) cases of CDV infection were diagnosed.