Avian Case Studies

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1. Dyspnoea in a cockatiel (*Nymphicus hollandicus*)

a. History
- young adult bird, kept as an indoor pet
- seed only diet
- acute onset of dyspnoea

b. Clinical presentation
- increased respiratory effort: mouth breathing, sternal lift, tail bobbing
- head stretched forward
- weakness

c. Physical examination and differential diagnosis
- good body condition
- audible respiratory noise – inspiratory squeak
- minimal handling tolerance
- no obvious abdominal swelling
- Differentials
  - Tracheal obstruction – inhaled seed, aspergilloma, bacterial granuloma
  - Severe lung disease – aspergillosis, bacterial pneumonia
  - Air sac disease – psittacosis, aspergillosis
  - "Extra-Respiratory" disease – liver enlargement, yolk-peritonitis, ascites, neoplasia

d. Diagnostic tests
- respiratory distress precluded much diagnostics
- bird starting to crash
- clinical signs suggested tracheal obstruction
- air sac catheter inserted, trachea scoped – millet seed midway down trachea

e. Diagnosis
- tracheal obstruction due to millet seed

f. Treatment and outcome
- air sac catheter eased immediate problem
- unsuccessful attempts to remove seed via glottis
- IV catheter introduced caudal to seed – pushed and blown out
- Air sac catheter maintained for 24 hours
- Treated with meloxicam and enrofloxacin as precaution
- Uneventful recovery

g. Discussion

2. **Polyuria/Polydypsia in a Severe Macaw (*Ara severa*)**

a. History
- 2 year old male, artificially incubated, hand-reared
- kept in a suspended well-sheltered aviary, with bonded mate
- fed sprouted seed, vegetables and fruit, with multi-vitamin supplement
- mate had died suddenly; autopsy and histopathology confirmed Chlamydiosis
- this bird tested strongly positive on Immunocomb test, and was treated with in-water doxycycline (Psittavet, Vetafarm)

b. Clinical presentation
- 2 weeks after starting doxycycline bird was presented for polyuria/polydypsia
- PU/PD had been present since starting medicated water
- Drinking in excess of 60mls/day (>140mls/kg/day)

c. Physical examination and differential diagnosis
- Wt 410g, good body condition although some condition had been lost since previous visit
- No other abnormalities were detected
- Bird is bright, alert, eating well.
- Differentials:
  - renal disease
  - liver disease
  - diabetes mellitus
  - other????

d. Diagnostic tests
- Biochemistries showed elevated AST (1937) with normal CK (265); stress leucocytosis present (24.5×10^9). Glucose, uric acid & urea normal
- Liver biopsy offered, but declined by owner

e. Diagnosis
- Hepatopathy of unknown origin; suspected doxycycline toxicosis

f. Treatment and outcome
- withdrew doxycycline; after 10 days bird was still PU/PD, but improving; droppings normal other than mild PU. AST 246; CK 142
- Put back onto doxycycline at half-dose. Within 3 days the PU/PD had returned. AST & CK this time remained normal. Doxycycline stopped, bird returned to normal within 5 days
- No further treatment attempted, bird remains in good health.

G. Discussion:

Tetracycline can cause fatty liver (microvesicular statuses) in humans, dogs, and presumably cats, in a dose-dependent manner. Although it has been hypothesized to be due to decreased lipoprotein synthesis and impaired clearance of triglycerides from liver, recent studies in dogs and humans suggest that statuses is due to impairment by tetracycline of mitochondrial beta-oxidation of fatty acids. Risk factors in humans for micro vesicular statuses include doses of tetracycline greater than 29 mg/kg/day parenterally, and concurrent pregnancy. It is not clear whether doxycycline has the same effect as tetracycline. Tetracycline has been associated with a

15-fold increase in ALT with mild lipidosis, mild cholangiohepatitis, and centrilobular fibrosis in a cat treated with standard dosages for 10 days (Kaufman & Greene, 1993), which is more consistent with an idiosyncratic response.

3. Feather-picking in a Sulphur-Crested Cockatoo (*Cacatua galerita galerita*)

a. History
- 4 year old, male pet bird
- seed, vegetable & fruit diet
- limited exercise

b. Clinical presentation
- acute onset of feather picking across shoulders, back & dorsal wings
- Physical examination and differential diagnosis
- mildly obese bird at 870g
- feather picking limited to areas described above
- no evidence of dermatitis/folliculitis
- Differentials:
  - behavioural problem
  - physical problem

c. Diagnostic tests
- Faecal Gram stain normal
- Biochems – hyperamylasaemia (5700IU/L); no other abnormalities
- Pancreatic biopsy performed - occasional foci of acinar degeneration associated with mixed leucocytic infiltrates, amongst which lymphocytes, histiocytes and heterophils were identified. This infiltrate was particularly noticeable in periductal locations.

d. Diagnosis
- feather picking secondary to abdominal pain associated with acute pancreatitis

e. Treatment and outcome
- conversion to pellets
- Baytril
- Omega 3 & 6 essential fatty acids
- Feather picking stopped within 2 weeks; took 6 weeks for amylase to return to < 1,000 IU/L; weight dropped to 790g, then rose to 840g and has remained constant for several years
- No more feather picking

f. Discussion: