REFERRALS
Newsletter

eastcott REFERRALS

ISSUE 13

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Dentistry, Oral & Maxillofacial Surgery

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RCVS Recognised & European Specialist in Veterinary Dentistry

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BVSc MRCVS

Soft Tissue Surgery

Tim Charlesworth

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Orthopaedics

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Surgery Referrals

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Ophthalmology

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Treatment of a Traumatic Palatal Defect in a Cat

by Peter Southerden

Traumatic palatal defects are relatively common in cats and are often associated with maxillary fractures resulting from road traffic accidents and can be a component of "high rise syndrome".

Whiskey had been involved in a road traffic accident that had eventually resulted in widespread fibrosis of his masticatory muscles and an inability to open his mouth. The referring vet performed a bilateral rostral mandibulectomy so that Whiskey could lap food. This was successful and Whiskey was able to eat well enough to maintain his body weight. However he eventually developed an oronasal fistula in the caudal right hard palate and a subsequent chronic rhinitis. It is likely that the fistula was due to ongoing abrasion of the palatal mucosa with the tongue because of his inability to open his mouth and underlying palatal bone defects associated with the original maxillary fractures.

Conventional techniques to repair the fistula were not suitable for this case because surgical access was very limited and repeated abrasion of the surgical site would have predisposed to wound breakdown.

The use of palatal obturators is a recognised technique to temporarily close traumatic palatal defects whilst tissues heal prior to definitive surgical closure. They are also used as a long term solutions in some cases where surgery is not possible or has failed. In Whiskey's case a silicone nasal septal button (Invotec International, Florida, USA) was used as a semi permanent obturator. Whiskey tolerated the obturator very well and his nasal discharge quickly resolved.

The button is still in place and well tolerated twelve months after initial placement.

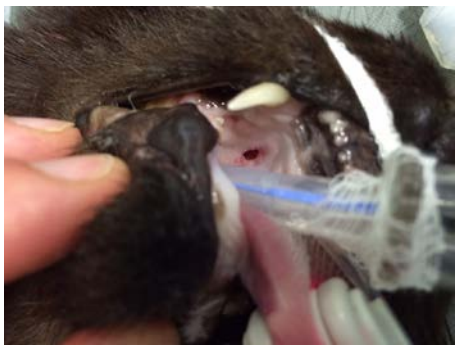

Fig 1: Photograph showing an oronasal fistula in the right caudal hard palate in a cat.

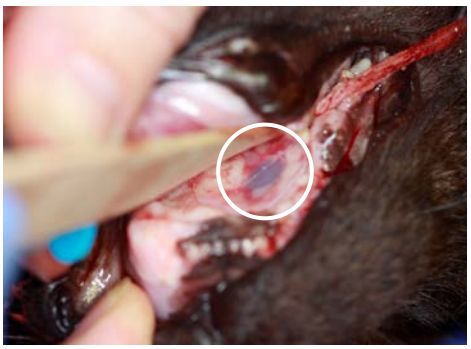

Fig 2: Photograph showing an oronasal fistula in the right caudal hard palate in a cat with a silicone nasal septal button placed as a semi permanent obturator (circled).

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Babesia Update

by Jenny Reeve

Following identification of Babesia canis in Dermacentor reticulatus ticks in Essex earlier this year and an associated small cluster of clinical babesiosis cases in untraveled dogs, our internal medicine specialist Jenny Reeve reviews the presenting signs, diagnosis and management of babesiosis.

Babesia spp. are intraerythrocytic protozoan parasites, predominantly tick transmitted, although in the absence of vector presence, transmission is reported secondary to dog fights, blood transfusions and transplacental transfer. Large *Babesia spp.* include *B. canis*, *B. rossi* and *B. vogeli* and small *Babesia spp.* include *B. gibsoni* and *B. conradae.*

The **spectrum of disease** associated with *Babesia spp.* ranges from subclinical infections through to life-threatening sequelae depending upon both parasitic factors (infecting spp. and strain, with *B. rossi* considered particularly virulent) and host factors (predominantly immunocompetence). Haemolysis arises secondary to immunologic and non-immunologic removal of both parasitised and uninfected red blood cells; thus the severity of disease is not directly related to parasite burden. Associated alterations in erythrocyte membranes and activation of inflammatory cascades may result in erythrocyte sludging within capillary beds and be responsible for some of the reported complications of the disease, including the central nervous system signs seen in some patients. Thrombocytopenia is commonly encountered, sometimes in the absence of anaemia, and may be due to secondary immune- mediated destruction or consumptive processes.

Examination findings are reflective of haemolytic anaemia (pallor, tachycardia, bounding pulse quality, haemoglobinaemia/uria, icterus, splenomegaly, pyrexia), the systemic inflammatory response and specific complications associated with individual cases.

Laboratory findings include anaemia, whilst this is typically strongly regenerative, in acute disease this may appear non-regenerative (due to the 3-5 day delay in regenerative response), thus the possibility of babesiosis should not be excluded based upon an initial non-regenerative anaemia. As a result of the immunological basis for haemolysis, spherocytosis may be observed and both saline agglutination and Coombs' testing may be positive. Thrombocytopenia is a common concurrent finding although clinical bleeding associated with this is rare. Serum biochemistry findings are non-specific and reflective of degree of haemolysis (haemoglobinaemia, hyperbilirubinaemia), hypoperfusion/ hypoxia (increased hepatic enzyme activities, hyperlactataemia) and specific complications (e.g. hypoglycaemia, azotemia; uncommonly observed).

Definitive diagnosis of *Babesia spp.* infection

- **Blood film examination;** this generally has poor sensitivity (high chance of false negative results). Whilst sampling from a peripheral capillary bed (e.g. ear tip) may increase sensitivity, it remains too poor for this to be an adequate screening test. Visualisation of typical intra-erythrocytic parasites enables identification of large and small *Babesia spp.* but does not differentiate between subspecies.


Dermacentor Tick

- **Serology** (immunoflourescent antibody; IFA); a positive result demonstrates exposure to *Babesia spp.* but this may be historic and does not confirm *Babesia spp.* are the definitive cause of the current presenting signs. False negative results may be seen in early disease due to the delay in serologic response (repeating convalescent serology may be required), very young dogs or occasionally, inexplicably, in chronically infected dogs. Serology cannot be used for speciation as cross-reactivity occurs between *Babesia spp.*

- **PCR** (blood, less commonly splenic aspirates); has the greatest sensitivity for diagnosis in acute infection and a positive result confirms active infection. It is the only practical test for reliable differentiation between subspecies; this is of clinical importance as therapy differs between species. Initially a general *Babesia spp.* PCR (to screen for all *Babesia spp.*) with subsequent subspecies specific PCR (to identify the subspecies) is suggested. The subspecies PCRs are highly specific and will fail to identify other subspecies and are therefore inappropriate screening tests.

Clinical syndromes and signs that may be associated with *Babesia spp.* Infection

- Haemolytic anaemia +/- associated haemoglobinaemia/uria, icterus
- Thrombocytopenia
- Splenomegaly
- Non-specific pyrexia, inappetance, lethargy, weakness
- Less commonly: neurological complications, glomerulonephritis and/or acute kidney injury, respiratory distress, rhabdomyolysis systemic inflammatory response and disseminated intravascular coagulation

Treatment

A variety of **treatment protocols** (off licence use in the UK) have been described although imidocarb dipropionate is the preferred therapy for large *Babesia spp.* and combination therapy with atovaquone/azithromycin is most effective for small *Babesia spp.* The aim of therapy in non-endemic regions should be clearance of the organism; PCR 60 and 90 days after therapy may be used to evaluate success, which is not always achieved. Adjunctive treatments such as fluid therapy and blood product administration may be required in some cases. Occasionally the severity of concurrent immune-mediated haemolysis complicates treatment and if anti-protozoal therapy alone is not effective, in some cases a concurrent rapidly tapering glucocorticoid course may be of benefit.

Preventative measures include avoiding travel of dogs to endemic regions, prophylactic tick control (transmission may take a minimum of 2 days following attachment), vaccination (generally considered to offer some protection to *B. canis* and *B. rossi* and limit severity rather than incidence of disease), minimizing aggressive interaction between dogs and appropriate testing of blood donors and products to avoid iatrogenic transmission. In regions of geographic prevalence, the possibility of subclinical babesiosis should be considered prior to either splenectomy or chemotherapy; both of which are risk factors for subsequent development of clinical babesiosis.

Babesia spp. are prevalent in warmer geographic regions and remain rare in untraveled UK dogs. However, with recent demonstration of presence within competent vectors and progressive climate change, frequency of clinical babesiosis is likely to increase and should be considered as a differential diagnosis in dogs with appropriate presenting signs.

Feline babesiosis is considered less prevalent and therefore less well studied than the canine counterpart. A variety of feline specific, large and small, *Babesia spp.* of varying pathogenicity have been found to affect cats. Feline babesiosis typically follows a more chronic course and as a result of this, severe, clinically compensated, regenerative anaemia is often identified. Treatment of feline babesiosis is significantly more complicated as many anti-babesial drugs described in dogs are not effective and of those with reported efficacy, there is little margin between therapeutic and lethal drug doses.

Congratulations to Duncan

We are delighted to announce that, following examinations this summer, Duncan has achieved the RCVS Diploma in Small Animal Surgery (Orthopaedics). Duncan is happy to discuss or give advice on all matters relating to small animal orthopaedics and you can see some of his interesting cases on our website blog pages.

Duncan Barnes MA VetMB DSAS (Orth) MRCVS
RCVS Diplomate in Small Animal Surgery (Orthopaedics)

Introducing Poppy Bristow

Poppy is a recent addition to our multi disciplinary referral team and enjoys all aspects of surgery particularly soft tissue. Poppy is especially interested in cardiothoracic surgery, portosystemic shunts and minimally invasive surgery. Having spent a number of years in a university referral hospital and working abroad, this gives her a unique approach to the care she can offer both pets, owners and referring vets.

Poppy Bristow BVetMed MVetMed DiplECVS MRCVS European Specialist in Small Animal Surgery

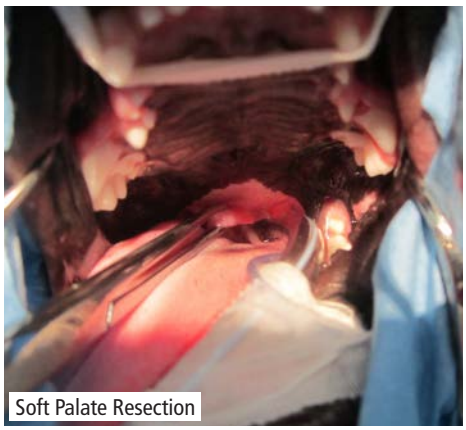
Seasonal Airway Disease

by Tim Charlesworth

We are all happy to see some warmer weather recently (at the time of writing!) but the increasing temperatures do place a strain on any dogs who suffer from significant upper airway disease. Many dogs will self-regulate and compensate for their respiratory compromise through reduced exercise/seeking out the cool shade etc. but many dogs can't say 'no' to a good walk and so we regularly see dogs referred to Eastcott as emergencies with acute upper airway compromise.

Broadly speaking, the dogs we see fall into 2 categories – the 'brachycephalics' and the 'paralysis' dogs.

1) Brachycephalic breeds include the English and French Bulldogs, Pugs and Boston Terriers. Many dogs with overlong soft palates and narrowed (stenotic) nostrils etc. will have major problems in regulating their body temperature due to an inability to pant and exchange heat efficiently. Many of these dogs will start showing signs of exercise intolerance, retching and even gastrointestinal disturbances all because of their breed-associated conformation. Symptoms often start at a very young age but progress due to secondary changes and further deformation of their respiratory tracts i.e. laryngeal collapse. These dogs can appear stable but can rapidly decompensate if they exercise or even just sunbathe on a hot day. Prompt treatment is essential and normally comprises oxygen therapy, rapid cooling, sedation and anti-inflammatories.



Soft Palate Resection

2) Laryngeal paralysis is very common in certain breeds especially Labradors and Golden Retrievers but any breed can be affected (including brachcephalics!). These dogs often present as older dogs with a history of panting, exercise intolerance and a change of bark (dysphonia). We now believe that the majority of affected dogs suffer a generalised polyneuropathy and many dogs will go on to develop subtle proprioceptive deficits, recurrent regurgitation and generalised muscle wastage as they get older. Many people attribute the observed 'slowing up' to concurrent osteoarthritis or 'old age' and it can be very difficult to differentiate between the two syndromes. Dogs with laryngeal paralysis can also decompensate in the heat. Their increased breathing effort sucks in the flaccid arytenoids occluding the laryngeal opening leading to cyanosis and potentially syncope and asphyxiation. These dogs have characteristically high pitched (stridorous) respiratory noise as they become excited or agitated. Affected dogs are managed with a 'tieback' procedure and usually have a vastly improved quality of life following the surgery with many dogs going home the same day as surgery is performed.

Presumptive diagnoses can often be made from history, signalement and clinical signs. The diagnosis can be confirmed when performing laryngoscopy under a light plane of anaesthesia but this is not without risk. We are happy to see any cases of suspected upper respiratory tract (URT) compromise and to perform the laryngoscopy ourselves so that we can then take the dogs straight to theatre. This avoids you having to recover dogs with un-corrected URT compromise which can be hazardous and occasionally require tracheotomy.

We are happy to give telephone advice about any possible referrals so please do contact us if you think you may have a brachycephalic or laryngeal paralysis case and we can discuss management with you or arrange the referral if required.

Michelin Starred Treat for a Referring Vet

Each time you refer to us, your name will be put in a 'hat'. Every 3 months we make a draw and the winner receives £200 towards a meal at a Michelin starred restaurant near them. June's winner was Dan Farmer who will be enjoying a meal at Cheltenham's Le Champignon Sauvage. The next draw will be in September 2016.

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