

# King Edward Referrals News

## Marlies was on holiday?

Not quite. Actually....

I attended a training course on using tracheal and urethral stents, then ECVIM (European Congress of Veterinary Internal Medicine) Congress for 3 days. This was followed by the ESVE (European Society of Veterinary Endocrinology) congress. All this happened in sunny (mostly) Toulouse in the week of 6-12 September. For stuff on stents, see Pg 3. The ECVIM congress was exhausting but very interesting. They feed you a delicious lunch, fill you up with wine and expect you to stay awake for the afternoon lectures! A number of medical experts gave comparative reviews. Phil Fox (many of you will recognize him as the author of cardiology texts and papers) gave an excellent lecture on feline cardiomyopathies and joined a panel of leading cardiologists in a discussion on how to classify them - something that has not become any clearer with time. There was an excellent review on the role of PCR in the diagnosis of vector-borne diseases. Ian Ramsey discussed current issues with treating Cushing's with trilostane - definitely not stuff that's hit the text books yet. The strong endocrine program continued into the ESVE day, the highlights of which were talks on new forms of hyperadrenocorticism, an update on hyperaldosteronism in cats and all the latest on the diagnosis of phaeochromocytoma. Tough work but someone has to do it! I'll try and pass on some of the highlights during future PECG meetings.



From left to right: Banks of the La Garonne River that flows through the middle of Toulouse with view of the Pont Neuf bridge; Pont Neuf bridge; The Capitole- seat of the municipal administration and also where they held the opening ceremony for the ECVIM conference

## Case Study no 4: Prostatic disease

**History:** A 8 year old MN Staffie was referred for abdominal ultrasound. His appetite had decreased over the last 2w, water intake appeared increased and he had lost some weight. In the last 2d he had stopped eating completely and had developed haematuria. Rods and low numbers of WBC seen on urine sample 4d ago. Ranclav was prescribed.

**Abdominal ultrasound:** The prostate was the only organ that appeared abnormal on ultrasound. It measured 3.19x3.69 cm in short axis (WNL for an uncastrated male of his age and weight) with multiple well defined irregularly outlined hypoechoic areas in both sides. There were also multiple areas of mineralisation (up to 4.9 mm long)( see Pg 2).

Question 1: What are the main DDs?

Question 2: How would you make the diagnosis?

Question 3: How would you treat this case?

## Index

Page 1-3  
Case study:

Page 4-5  
Introduction into Physiotherapy

Announcements  
Page 5

Page 6  
Physio—Case Study



A shop in Toulouse that ONLY sells TinTin stuff!

## Answers—prostatic disease

A 1: prostatitis with abscessation and prostatic neoplasia. They may occur concurrently.

A 2: Ultrasound guided prostatic FNA would be least invasive. The fluid from the cysts should be aspirated. In addition, the prostatic tissue should also be sampled. The presence of bacteria and white blood cells would be consistent with bacteria prostatitis.

Cytology of prostatic fluid aspirates in this case is shown below. L side fluid appeared macroscopically cloudy lemon yellow the R side more purulent. Although amoxy/clav does not penetrate into the normal prostate, the presence of inflammation may enhance penetration. In this case, bacteria were present on the initial urine sample. The antibiotics had resolved the cystitis and could have dramatically decreased bacteria in the prostatic aspirates as well.

Abdominal radiography could be considered: the presence of a periosteal reaction along the flat bones of the pelvis or lumbar vertebra is highly suggestive of prostatic neoplasia. More rarely, boney lysis in the lumbar vertebrae / pelvic bones is suggestive of boney metastasis. Prostatic mineralization is most commonly associated with neoplasia but may also be associated with chronic inflammation. Ventral displacement of the colon could indicate medial iliac / hypogastric lymph node enlargement - consistent with reactive lymphadenopathy / lymph node metastasis. Lymph node enlargement is more readily appreciated on ultrasound though. A positive contrast urethrogram / cystogram does not add significant information as contrast may reflux into any abnormal prostate and there may be changes in the prostatic urethra whatever the underlying aetiology.

Surgical biopsy: this would lead to a definitive diagnosis but is much more invasive. Prostatectomy is rarely curative as prostatic tumours have usually metastasized at the time of diagnosis. It is also complicated by post-op incontinence in the vast majority of cases. You need to be sure you're NOT dealing with a tumour if you drain the prostate surgically as the drainage techniques would hasten metastasis.

Prostatic abscesses are unusual in castrated dogs as the prostate has usually involuted - particularly in dogs castrated at 6 months of age. If there is any doubt whether two testicles were removed when the patient was castrated you could consider checking testosterone levels.



Prostate prior to aspiration: note 2 irregular hypoechoic areas in a relatively symmetrical prostate. Hyperechoic areas did not shadow but were hard when touched with a needle



Prostate immediately after aspiration and before instilling Baytril. Note that hypoechoic fluid filled areas have collapsed

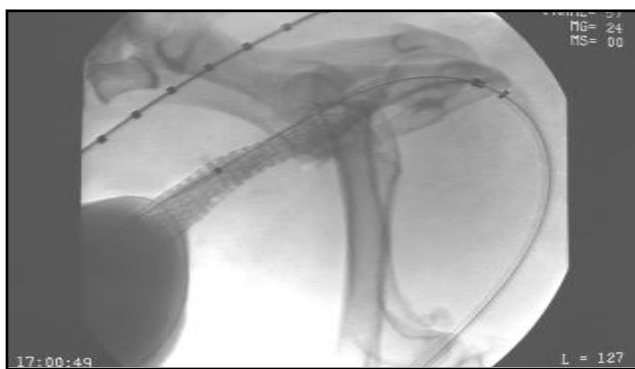


Cells in aspirate. Note scattering of neutrophils, absence of bacteria and pleomorphic prostatic cells including a multinucleate cell.

A 3: As the diagnosis was in question, we treated the prostatitis initially - by aspirating the fluid from the cysts once a week and instilling enrofloxacin into the cavity we'd just emptied with the same needle. The dog was treated with oral marbofloxacin for 6 weeks. Prostatic abscesses are expected to resolve after 1- 4 treatments. If the patient had not already been on antibiotics we would have cultured the initial aspirates to make sure that antibiotic choice was appropriate. In this case, the neutrophil infiltrate had virtually disappeared by the 4<sup>th</sup> treatment, but marked dysplastic changes remained in the prostatic cells. Thus a prostatic carcinoma was highly likely. In this case we think it was complicated initially by a bacterial prostatitis.

Aspiration is my treatment of choice for prostatic abscesses as it is much less invasive than surgery. Older treatments for prostatic abscesses include surgical drainage and omentalisation or external drainage. This should be accompanied by castration if the animal is not already neutered. **Antimicrobial therapy alone will not cure prostatic abscesses.**

Treatment of prostatic tumours is mostly unrewarding in dogs. In most cases, the tumour has metastasized by the time diagnosis is made. In a study of 35 dogs with prostatic carcinoma, the dogs that were treated with piroxicam (0.3 mg/kg sid) lived significantly longer than dogs that were not treated (6 months vs. a few weeks). When compared with data on a variety of surgical approaches and radiotherapy which resulted in an average 3 months survival, NSAIDs still look better than the more invasive options. Piroxicam is associated with an increased risk of renal side effects and GI ulceration when compared to other COX-2 inhibitors but is also the drug with the most data on its anti-neoplastic effect. Concurrent administration of Cytotec (misoprostol) at 2-7.5 µg/kg tid may guard against gastric ulceration. Renal and hepatic function should be monitored 1 and 3 months after the start of therapy, then every 3 months after that assuming everything else is stable. **As marbofloxacin will increase circulating piroxicam levels and with it the risk of toxic side effects, the dose should either be halved while he is on antibiotics or he should start treatment when he has completed his antibiotic course (safer).**



Left: Positive contrast fluoroscopy (thus the inverted image) of a male dog with an obstructed urethra. Note the extensive contrast reflux into the prostate. Right: Urethral stent in place. The delivery device is still visible within the urethra, which is now markedly dilated. A sizing catheter is visible in the colon—this aids selection of the correct stent size

### Follow up:

Two months later, the dog presented with stranguria. Life limiting consequences of prostatic neoplasia include severe pain, dyschezia (enlarged prostate / sublumbar lymph nodes) or urethral obstruction. If the latter is the only problem, this can now be palliated with a urethral stent as an alternative to a cystostomy catheter. Owners may find stents practically / aesthetically more acceptable than a catheter. Urethral stents cost 1300 US dollars each, so this procedure will only be suitable for selected patients and clients. A stent does nothing to the tumour other than keep it out of the way so that the patient can pee past it. Correct sizing of the stent is vital to decrease the risk of stent migration. A proportion of patients will be mildly - markedly incontinent after stent placement (4/13 dogs in the only published series). Survival times for the 13 dogs ranged from 6-105 days.

I see a limited market for urethral stents in dogs with bladder / prostate tumours at current costs and with current increases in survival times. Stents have also been used to treat **urethral strictures**, where survival times should be significantly longer! **Tracheal stents**, on the other hand, are cheaper than urethral ones and could prove a useful addition to our treatment options for dogs with **collapsing tracheas** - more of this in the next newsletter.

# Introduction to Physiotherapy

## Goals:

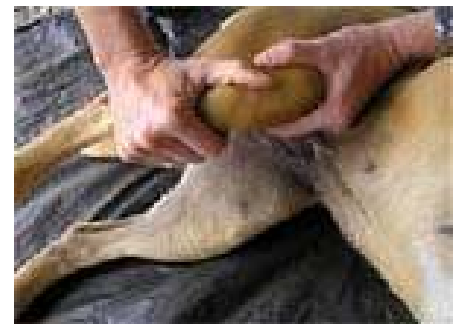
- Eliminate cause of dysfunction
- Improve clinical signs
- Alleviate pain
- Reduce inflammation
- Prevent or minimize atrophy of muscles
- Enhance general fitness

## Benefits:

- Improve Function and quality of movement
- Reduction of pain, swelling
- Increase speed of recovery
- Increased strength, range of motion, endurance and performance
- Non-invasive
- Possibly reduces cost for owners
- Improved and prolonged quality of life
- Prevention of other injuries
- Decreased need for NSAIDs
- Improvement or preservation of muscles, nerves and joint function
- Comprehensive patient management

## When to apply:

- Post-surgical recovery: orthopedic, neurological
- Musculoskeletal injuries: sprains, strains, tendonitis, muscle weakness
- Disc disease
- Gait abnormalities
- Joint injuries
- Wound healing
- Pain Management
- Performance problems
- Edema and circulation problems
- Cardio-respiratory complications
- Weight loss/management



# EXAMINATION OF THE PHYSICAL THERAPY PATIENT

## Initial Examination:

### History:

Species, breed, age and gender  
General Information  
Owner's assessment  
Activity level  
Eating Habits  
Vaccinations  
Allergies  
Past Medical History  
History of present illness



## Clinical Examination

### Posture and Gait

When sitting  
When sitting down, lying down and standing up  
At a walk and trot = posture and lameness  
During turns

### Palpation of the limbs and trunk at a stance

Limb muscle mass or condition  
Temperature of muscles and joints  
Swelling / enlargement  
Muscle tone  
Spinal column - muscle mass, symmetry, temperature, palpation of painful points, skin fold rolling test, spinal mobility

### Specific Tests for assessment of the back

### Palpation of the limbs in recumbency

### Additional tests

Range of motion  
Muscle mass / limb circumference

## Next PE Clinicians Group Meetings

5 October 19h00 Hermes Conference Centre: **Kenneth Joubert** will be speaking on **pain management**. Merial is sponsoring the talk.

2 November 19h00 Old Gray's Sports Club: **Marlies** will be giving an update on **canine and feline liver disease**. Iams is sponsoring the talk

### **Bayview Animal Clinic**

has 50 Cyclohexal  
100mg capsules to sell

### **Mount Croix**

Has Cisapride 10mg/  
ml 50 ml available.

### **Mount Croix**

has some Torbugesic  
paste that's looking  
for a new home -  
for dogs with severe  
coughing



## Physiotherapy Case Study: Cruciate Ligament Rupture

**History:** 2 year old Australian Shepherd with on and off left hind lameness, of 9 month duration. After cage rest the dog would be sound for a few weeks until exercise was increased. On clinical examination a mild draw sign was noticed. After another 6 weeks of cage rest the lameness was still evident. Radiographs were taken and 2 joint mice were noted and the draw sign was more evident. Surgery was indicated - 2 joint mice and bucket handle were removed and the cruciate stabilized. Dog was sent home for rest with NSAIDS and antibiotics.

### Treatment:

#### **STRICT CAGE REST FOR 4WEEKS**

Within 24hrs of surgery:

Cryotherapy was indicated to help with inflammation and pain - Cold packs for 15min 2-3 times daily  
PROM- very slow and gentle movements of the joints above and below the surgical site -2-3 times daily

1 - 3 days post Surgery:

Cryotherapy - apply cold pack to affected joint for 15min 2-3 times daily

Passive exercise: PROM - flexion and extension of joints above and below, making sure you are stabilizing the knee.

After PROM apply cold pack again

Massage - all over body stroking to vitalize the wellbeing of the patient. Special emphasis of massage on the affected limb, hindquarter and back. Making sure the dog is never in any pain while massaging.

Active Exercise - on lead very restricted short walks ( basically to go to the toilet)

4-21 days post surgery:

Thermotherapy - apply before PROM for 10min

Cryotherapy - after exercise for 10min

Passive exercise - PROM flexion and extension. 10 repetitions through their comfortable ROM 2-3 times daily

Massage - concentrate on affected leg, supporting the surgical site at all times. Neck and spine must also be attended to.

Active exercise - short leash walks, encourage slow walking. The use of a towel or blanket to support weight is indicated if on smooth or slippery surface

3-5 weeks post surgery:

Thermotherapy - apply before PROM for 10min

Cryotherapy - after exercise for 10min

Passive exercise - PROM flexion and extension, through their comfortable ROM, bicycling movements (lateral and standing), flexor reflex stimulation and stretching, making sure joint is always supported. 2-3 times daily

Massage - affected limb, neck, spine and hindquarter 2-3 times daily

Active exercise - short leash walks, sit to stand exercises 2-3 times daily

6-8 weeks post surgery:

Thermotherapy - apply before PROM for 10min

Cryotherapy - after exercise for 10min

Passive exercise - PROM flexion and extension, through their comfortable ROM, bicycling movements (lateral and standing), flexor reflex stimulation and stretching, making sure joint is always supported. 2-3 times daily

Massage - affected limb, spin , neck and hindquarter 1-2 times daily

Active exercise: Sit to stand, walking in large circles, gradual inclines and you can also slowly increase length of leash walks 2 times daily

Hydrotherapy - this can be introduced once wound has healed. Start off with short periods of 2-3 min's in the pool or on the underwater treadmill 2-3 times per week

**If at any point during the physiotherapy, you become concerned—refer the patient back to the vet for a full check up**

