



Equine Radiology Workshop Review

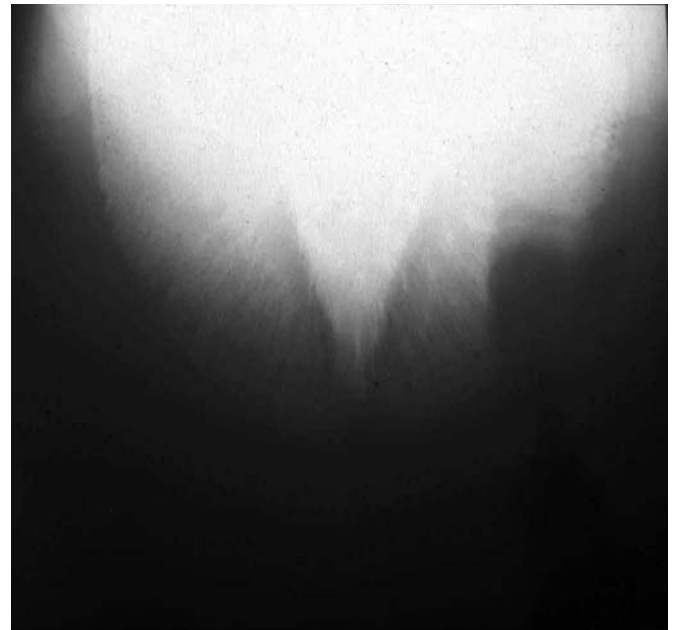
Over subscribed course a resounding success

The RVC CPD Unit, in partnership with the British Equine Veterinary Association, ran a very successful three-day Equine Radiology Workshop from 18-20 July 2006. Following an introductory half-day, covering the range of diagnostic imaging options available for the horse and their individual roles in the diagnostic process, 24 equine practitioners were taken on a tour of the equine skeleton from the foot to the head and vertebral column.

Each anatomical region was dealt with by a sequence of introductory lecture, series of film readings and round-up discussion, leading to lively debate about the significance of various perceived abnormalities.

The 'home team' of Professors Stephen May and Roger Smith, and Drs Renate Weller and Ehud Eliashar, were joined by other equine imaging experts from Bristol and Edinburgh Veterinary Schools, namely Professor Alistair Barr and Dr Martin Weaver.

The course, which was oversubscribed, leading to a number of disappointed applicants was judged a resounding success and will be repeated in 2007.



Keratoma, showing pedal bone resorption

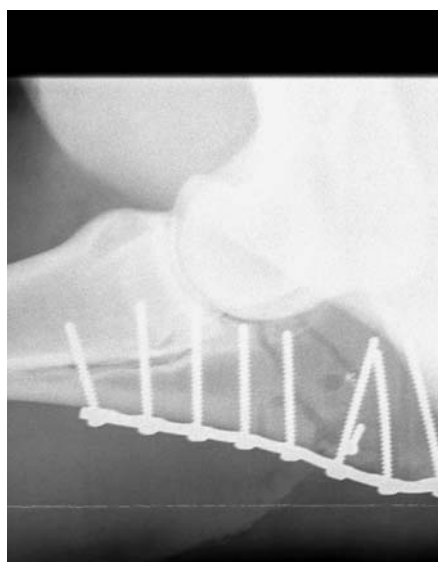
If you are interested in attending future courses, see www.rvc.ac.uk/cpd



Reviewing rads



Fracture of the ulna



Ulna fracture repair

In this Issue

Olecranon Fractures p2

What's your diagnosis? p2

Quiz answers p3

BEVA 2006 p3

Who's who at ERH p4

Olecranon Fracture

Olecranon fractures, whilst they appear horrific to owners when they occur, are often relatively simple to fix and carry a good prognosis.

This horse had been kicked in the field and presented with the classical swinging leg and extreme distress due to triceps dysfunction. Radiographs confirmed the diagnosis of a displaced olecranon fracture. A Robert-Jones bandage with caudal splint was applied which stabilised the leg, immediately making the horse much more comfortable. Although there is pain associated with the fracture site, the main cause of distress to the horse is the inability to control the leg. Once the carpus is fixed in



extension the horse is able to bear full weight on the limb.



Left The characteristic “dropped elbow” of an olecranon fracture.

Above The leg stabilised with a Robert-Jones bandage and caudal splint.

This fracture was fixed using a 10 hole low contact dynamic compression plate, contoured around the proximal aspect of the olecranon. The horse was discharged 12 days after admission and is doing well.

What's your diagnosis?

A 22 year old thoroughbred cross gelding with a three week history of weight loss was referred for investigation of acute colic. Physical examination findings were HR 44, RR 16, T 36.7°C, reduced gut sounds and a grade III/VI holosystolic murmur with PMI left cardiac apex region.

Serum clinical pathology:

- Total protein 76 g/L (normal range 50-60)
- Albumin 30 g/L (31-38)
- Globulins 46 g/L (16-30)
- GGT 107 iu/L (5-34)
- Total bilirubin 58 mmol/L (8.5 - 49)
- SDH 29 iu/L (2-7)
- Bile acids 26.5 mmol/L (2.6 - 12.8)

test resulted in a peak increase in baseline plasma glucose values by 50% at 150 mins

- Gastroscopy revealed delayed gastric emptying
- Abdominal ultrasonography was unremarkable apart from the liver (Figs 1&2)

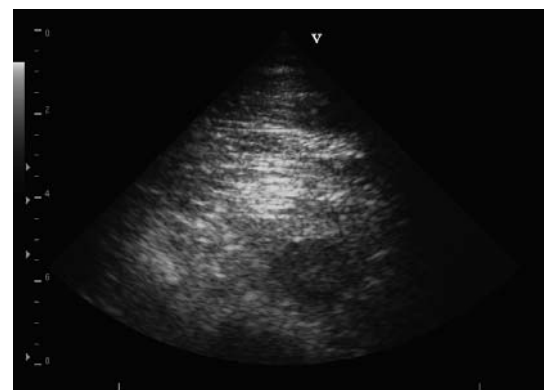


Fig 1



Fig 2

Further investigations:

- Peritoneal fluid cytology and chemistry were normal
- An oral glucose absorption

Questions

1. What do you suspect from the physical examination, clinical pathology findings and further investigations?
2. What would you do next?



Come and see us at the BEVA Congress 2006

and collect your free gift!



The British Equine Veterinary Association's Annual Congress is a lively, friendly and fast-growing exhibition. With over 1,100 delegates and exhibitors attending per day last year, it is widely acknowledged to be Europe's pre-eminent equine veterinary congress. This year it takes place from Wednesday 13th until Saturday 16th September at the ICC, Birmingham.

The Royal Veterinary Equine Referral Hospital will be located in stand D1, come along and claim your free gift.

If you haven't already registered, visit www.beva.org.uk for more information.

Contact details

The Royal Veterinary College
Equine Referral Hospital
Large Animal Care Centre
Hawkshead Campus
Hawkshead Lane
Hatfield
Herts AL9 7TA

Tel: 01707 666667

Fax: 01707 666669

Email: eqhosp@rvc.ac.uk

www.rvc.ac.uk/hospitals

What's your diagnosis?

Answers

presumably the cause of the malabsorption. The weight loss was caused by a combination of loss of liver and small intestine function, whilst the colic was probably the result of liver and peritoneal distension by the carcinoma masses and associated inflammation. Although the Tru-cut biopsies were collected under ultrasound guidance, the biopsies did not contain carcinoma tissue. This is not uncommon where focal abnormalities occur in the liver and should be remembered when interpreting liver biopsy results where focal or multifocal disease is suspected. Finally, although the presentation of this case was acute, disease had almost certainly been present for weeks or months. The large reserve capacity of the liver and GI tract means that clinical signs appear only in advanced disease.

2. The liver ultrasonograms show multiple, approximately circular, soft tissue opacities within the liver parenchyma and ultrasound-guided liver biopsy is indicated to determine the nature of these opacities. Two Tru-cut biopsies were obtained but these were unremarkable histologically. The horse continued to experience intermittent colic and was euthanased. Post mortem examination revealed multiple large (1-3 cm) spherical masses throughout the liver, pancreas and proximal duodenum. The masses were identified as biliary duct carcinoma. There are few reports of biliary duct carcinoma in the literature and this case is interesting because the clinical picture is entirely explained by the underlying pathology. The carcinoma masses were occluding bile outflow and also destroying the liver parenchyma. The masses in the pancreas and duodenum were occluding normal flow along the small intestine and were also

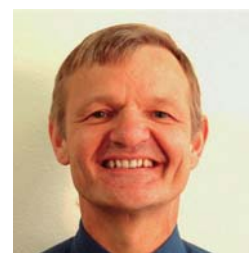
Comment

1. The clinical pathology (raised total protein with hyperglobulinaemia, raised total bilirubin, raised bile acids, increased GGT and SDH) are suggestive of hepatopathy, presumably involving both bile duct compromise and hepatocellular death (GGT is bile duct-associated and SDH is hepatocyte-associated). The ratio of conjugated: unconjugated bilirubin was not measured but would have provided a useful estimate of the degree of bile duct compromise (raised conjugated bilirubin) and hepatocellular death (raised unconjugated bilirubin). The raised bile acids suggest a significant loss of functional hepatocytes since these cells are responsible for removal of bile acids from the circulation. The gastroscopy and abnormal oral glucose absorption test both suggest proximal GI tract pathology with small intestinal malabsorption. The cardiac murmur was due to mitral regurgitation and was not material to the colic and weight loss problem (there were no clinical signs of cardiac compromise).

Who's who



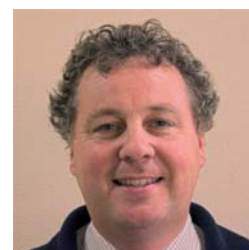
Professor Josh Slater BVM&S PhD MRCVS
Professor of Equine Studies



Stephen May MA VetMB PhD DVR DEO DipECVS FRCVS
RCVS & European Specialist in Equine Surgery
Professor of Equine Medicine and Surgery



Kathy Clarke MA VetMB DVetMed DVA DipECVA FRCVS
RCVS & European Specialist in Veterinary Anaesthesia
Senior Lecturer in Veterinary Anaesthesia



Roger Smith MA VetMB PhD DEO DipECVS MRCVS
RCVS & European Specialist in Equine Surgery
Professor of Equine Orthopaedics



Richard Piercy MA VetMB MS DipACVIM MRCVS
American Specialist in Large Animal Internal Medicine
Senior Lecturer in Equine Medicine



Michael Archer BVSc MS DipACVS MRCVS
American Specialist in Large Animal Surgery
Lecturer in Equine Surgery



Kate Borer BVSc CertVA Dip.ECVA MRCVS
Lecturer in Veterinary Anaesthesia



Ehud Eliashar BSc DVM DipECVS MRCVS
European Specialist in Large Animal Surgery
Lecturer in Equine Surgery



Justin Perkins BVetMed CertES(ST) DipECVS MRCVS
European Specialist in Large Animal Surgery
Lecturer in Equine Surgery



Renate Weller Dr Med Vet MRCVS
Lecturer in Diagnostic Imaging



Nicola Menzies-Gow MA VetMB PhD DipECEIM MRCVS
Lecturer in Equine Medicine



Peter Day DipWCF Farrier