Case File: Carpal Hygroma – “Water on the “Knee”

Signalment and History
- 2-year-old Quarter Horse gelding
- Large swelling over the left carpus
- History of injury to the left carpus when he was a yearling

History and Physical Exam
- No lameness
- No pain elicited upon flexion of the carpus
- Swelling was fluctuant and non-painful (Figs. 1a and 1b)

Differential Diagnoses
- Effusion of the extensor carpi radialis sheath
- Carpal hygroma
- Severe carpal joint effusion

Figs. 1a and 1b: Images of the horse's left front carpus upon presentation to CSU-VTH. The swelling had been present for multiple months and was non-painful. Removal was requested for cosmetic reasons.

CONTACT INFO
Colorado State University
Veterinary Teaching Hospital
300 West Drake Road
Fort Collins, CO 80523-1620
Phone: (970) 297-5000
Fax: (970) 297-4100
csvth.colostate.edu

At Colorado State University, equine veterinary care is delivered through the collaboration of three nationally recognized equine service centers:
- Colorado State University Veterinary Teaching Hospital Equine Service
- Colorado State University Equine Reproduction Laboratory
- Colorado State University Orthopaedic Research Center

Equine treatment capabilities at CSU are at the forefront of equine veterinary medicine through the shared expertise of these organizations.

Questions regarding this case file may be directed to:
Dr. Katie Seabaugh, DVM
Katie.Seabaugh@colostate.edu

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Findings

- Radiographs (Figs. 2a and 2b)
  - No bone abnormalities noted
- Contrast Study
  - No communication with the carpal joints
  - Structure extended around the medial and lateral aspects of the carpus

Treatment Options

- Drain fluid and bandage with stacked bandage +/- sleeve cast or splint
- Injection of atropine (7 mg) into the hygroma
- Drain fluid, inject with triamcinolone, and bandage with stacked bandage +/- sleeve cast or splint
- Surgically drain fluid and curettage lining, place penrose drains to prevent fluid accumulation, and bandage with stacked bandage +/- sleeve cast or splint
- Remove hygroma en bloc and bandage with stacked bandage +/- sleeve cast or splint

Treatment

- The horse underwent surgery for complete extirpation (fluid sac is left intact) of the carpal hygroma (Fig. 3 shows a carpal hygroma on another horse)
- During the surgery, a small one-way communication with the carpus could be seen
- The horse was maintained in a tube cast over a bandage for four weeks, a bandage and caudal splint for two weeks, and a padded bandage for two weeks (Fig. 4)
- He was given oral trimethoprim sulfa for 10 days
- Sutures were due to be removed at 3 weeks
- The horse did well initially but developed a bandage sore on the medial aspect of his carpus that required additional bandaging and antibiotic therapy
- He returned to training approximately six months after surgery

Discussion Points

Carpal hygromas are described as acquired bursae. This differs from hygromas at the elbow ("shoe boil") and at the point of the hock ("capped hock") because in those situations, a small subcutaneous bursa is always present. Carpal hygromas often develop secondary to trauma to the region. Once the pocket forms, it develops an endothelial lining which continues to produce serous fluid. They do not typically become infected but can after drainage or injection. Carpal hygromas should not be directly associated with joints or tendon sheaths, despite this they occasionally have communication with underlying joints or tendon sheaths in the form of one-way valves. There
is a potential for recurrence if the endothelial lining persists. Another possible complication is increased fibrosis in the region of the hygroma resulting in decreased range of motion of the carpus.

**Take Home Message**

- Often require bandaging and immobilization for at least one month post-operatively; this is an essential component of treatment
- High rate of recurrence
- Important to make sure the hygroma does not communicate with the carpus

Questions regarding this case file may be directed to: [Dr. Katie Seabaugh](mailto:Dr.Katie.Seabaugh).
Call for Clinical Study Participants

For validation purposes of our newly purchased EEG equipment, we are looking to enroll horses with a presumed diagnosis of Seizures/Epilepsy in a study that includes a routine work-up with a neurological examination, a CT-exam of the head, CSF analysis, and routine blood work. Prior to the CT exam, but while under general anesthesia, EEG-data will be collected (free of charge). A $700 refund will be deducted from the total hospital invoice for each patient enrolled in this study.

For more information, please call or email:
Dr. Lutz Goehring
(970) 297-4246
lutz.goehring@colostate.edu

Upcoming Events at the VTH

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<tr>
<td>EVENING ROUNDS FOR EQUINE DVMs</td>
<td>Monday, 10/01/12</td>
<td>6:30 p.m. to 7:30 p.m.</td>
<td>Dr. Katie Seabaugh, <a href="mailto:katie.seabaugh@colostate.edu">katie.seabaugh@colostate.edu</a></td>
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<td>Join the Equine Department the first Monday of even-numbered months for evening table topics.</td>
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<td>A call-in option is available if you can’t attend in person.</td>
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<td>October’s topic is <strong>Upper Airway Endoscopy</strong></td>
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