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Surgical Case Report:

Superficial Digital Flexor Tendon Luxation

EMPHASIS:
This uncommon injury is usually seen in the Sheltie, but can occur in any breed. The superficial digital flexor tendon is the caudal-most component of the calcanean or Achilles tendon, and its retinaculum holds it on the caudal aspect of the tuber calcanei. When this retinaculum tears, usually due to exercise-related trauma, the tendon can luxate medially or laterally. Fortunately, the prognosis is quite optimistic for surgical repair. In this article, the technique for stabilizing this luxation will be described.

PREOPERATIVE CARE:
1. Physical examination.

AXIOM: Always perform diagnostic ligament and joint examinations with the patient sedated. Minor palpable abnormalities may be missed if the pet is active, awake, and struggling.

AXIOM: With the tarsal joint in extension, the luxated ligament can be easily be moved in and out of position (See Figure 1) to confirm the diagnosis. Fluctuant swelling is usually present as well, over the tuber calcis.

2. Two-view radiographs of the tarsus.


Figure One: This schematic drawing depicts the medial aspect of the right tarsus.
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PREOPERATIVE CARE:
1. Indwelling cephalic catheter.
2. Intravenous anesthetic induction protocol (Ketamine/Valium, Propofol, etc.)
3. Endotracheal intubation and inflate cuff.
4. Isoflurane inhalant anesthesia to effect.
5. Lead II ECG and pulse oximetry monitoring during prep and surgery.
6. Clip and prepare the distal limb.
7. Cefalexin 20 mg/kg IV immediately preoperatively.

SURGICAL PROCEDURE:
1. Caudomedial or caudolateral incision extending from the distal tibia to the distal end of the fibular tarsal bone (see Figure 2).

**AXIOM:** Make this incision on the side where the retinaculum has torn: i.e. if the tendon has luxated laterally, make the incision medially and vice versa.
2. Incise the subcutaneous tissues along the same line.
3. Clear away any fibrinous debris, blood clots, etc.

**AXIOM:** If the bursa (see Figure 3) is distended, it should be incised to permit the removal of fluid, hematoma, fibrin, etc.
4. Return the tendon to its proper position, on the caudal aspect of the fibular tarsal bone.
5. Using polypropylene sutures of 2-0 to 0 gauge, suture the torn edge of the retinaculum and tendon (see Figure 4).
6. Routine subcutaneous and skin closure.
7. Place a cast to maintain the joint in extension.

POSTOPERATIVE CARE:
1. Cephalexin 20 mg/kg PO TID for 5 days.

Figure Two This schematic drawing depicts the superficial digital flexor tendon having luxated laterally. The incision is therefore made on the lateral aspect of the hock.

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**Figure Three:** This schematic drawing shows an incision in the distended bursa allowing blood, fibrin and clots to escape.

**Figure Four:** This schematic drawing depicts the superficial digital flexor tendon replaced on the caudal aspect of the fibular tarsal bone with the retinaculum sewn to the edge of the tendon preventing lateral luxation.
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2. Pain management using injectable, oral or transdermal analgesics as warranted.
3. Suture removal at two weeks postoperatively.
4. Redress the cast at two-week intervals until it is removed, six weeks postoperatively.

PROGNOSIS:
The prognosis is excellent and a return to full weight bearing is expected.

AUTHOR'S NOTE
If you have any questions concerning this paper, additional references, surgical supplies or sources of products mentioned or used in this protocol, please FAX us at 1-310-479-8976. We will answer your questions promptly.

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Coming Attractions
Urinary incontinence in the dog is a frustrating challenge for both the owner and the veterinarian.
Although many patients will respond to medical management, other cases will remain refractory, and surgery must be considered. Numerous surgical techniques have been devised, none of which have met with consistently successful results.
Currently, we feel that colosuspension is the most straightforward and effective surgical option.
Next month, we shall present our surgical protocol for colosuspension to relieve urinary incontinence in the female dog.

See you then!