

SUPERFICIAL DIGITAL FLEXOR TENDON LUXATION:

A loud “ouch”, a swollen heel, and a bit of surgery.

**Synopsis-- Anatomy and the Disease**

The superficial digital flexor (SDF) tendon runs over the caudal/plantar surface of the calcaneus in a shallow groove bound by fascia within a bursa and continues down to the toes to, well, flex them! (I love the naming conventions that actually make anatomy easy to remember and apply!)

Much like the patella, it tracks in its little groove when all is aligned and on course. A shallow, dysplastic groove and/or loose, insubstantial support fascia and/or a quick twist, turn move on the part of a young active dog, and the tendon will jump its track. The dog most commonly yipes loudly and goes 3-legged lame immediately. A soft tissue swelling over the point of the calcaneus is the initial finding. This progresses to a fluid-filled knob on the heel and a weight bearing lameness.

On exam, range of motion manipulation of the hock results in a subtle popping, again, much like a patella, that signifies a tendon slipping over the ridge of its groove. They can luxate to either side in different patients, and often it is hard to decide which way it is going once a lot of swelling is present.

Surgical Overview:

The sooner the diagnosis, and the sooner the surgical stabilization, the better the outcome. These can be tricky diagnoses unless you are picking up the subtle clues the tendon is sending you. “It feels like a patella luxation, but it’s in the heel.” Yup.

Surgery is an exercise in imbrication and subtle debridement. Thereafter, immobilizing the hock is essential. Mature fibrosis must take over and stabilize the tendon longterm.

The **indications & rationale** for surgical treatment are:

- Palpable tendon luxation
- Absence of radiographic abnormalities supporting a different diagnosis (tendon avulsion/laceration, fracture, neoplasia, etc)

Other options for treatment (besides surgery) are:

- Tarsal splint/brace (not a permanent solution; longterm/lifetime wear; poor function w/out brace)

Supportive/ancillary options with surgical treatment are:

- Postop splint/brace x 6-8wks
- Custom orthotic allows home management (vs. in-clinic bandage management)
- Custom orthotic allows gradual return to full tarsal stress and optimal fibrosis maturation (24/7 → daytime wear → active wear → off)

The **perioperative experience** for pet and owner includes:

- Bandage/splint preop for support, minimizing additional soft tissue injury.
- Surgery as soon as feasible
- Medical splint postop 6-8wks
- Medical splint postop 1-2wk postop minimum, if plan is for custom orthotic
- Activity restriction to leash, no exercise x 8wks; gradual return to activity subsequent 4wks (total 3mo)

- Professional PT not required but may improve healing and maintain conditioning during restricted period.

Expectations for outcome are:

- Return to normal activity following 3mo restricted activities.
- Gross appearance of proximal “heel” likely to remain larger than normal.

Complications that may arise with this procedure are:

- Re-luxation (serious, rare; requiring re-operation)

Postoperative **outcomes may be poor** due to the above complications, and/or:

- Poor patient/owner compliance with splint/brace management
- Poor patient/owner compliance with activity restrictions
- Bandage related skin injury (pressure sores, pododermatitis)

What a surgeon needs prior to surgery:

- Affected leg/body part “**marked**” by owner for confirmation (wax “costume makeup” works well)
- Skin near the surgery site **CLEAR of infection** (papules, pustules, crusts, collarettes, etc.) If urgent surgery, owner must be alerted to *increased risk* of incisional, deep and/or implant infections.
- Postop **plan** for splint/brace (options: medical bandage/splint changed weekly; custom orthotic managed at home)

General considerations and complications for all surgery/anesthesia procedures are:

- *Difficult and/or painful anesthetic recovery (variable; may require additional medications or re-hospitalization)*
- *Incisional infections (rare, minor; usually require oral antibiotics)*
- *Incisional dehiscence (rare, minor or major; may require surgical revision)*
- *Adverse anesthetic event (rare, major; may result in serious impairment or death)*

Proper owner expectations are important to a successful experience and patient outcomes. Please discuss this information with your clients while assisting them with decision-making for **Superficial Digital Flexor Tendon Luxation**.

Lara Rasmussen, DVM, MS

Diplomate, American College of Veterinary Surgery

DIRECT VETERINARY SURGERY, LLC

(See additional materials at www.directvetsurg.com for veterinary professionals and pet owners.)