Zone 1 Extensor Tendon Protocol (Mallet Finger)-- Dr. Trueblood

Indications: Mallet fingers result when the terminal extensor tendon is detached from its insertion at the finger’s distal phalanx. This can result from sharp laceration or blunt avulsion, such as in a forced flexion injury when the finger is held in extension. Open injuries are often treated surgically. Mallet fractures (where the bony attachment of the extensor tendon detaches from the rest of the proximal phalanx) may be treated surgically when the fragment is large enough to destabilize the distal interphalangeal joint. Acute (<4 weeks old at presentation) soft tissue mallet fingers (closed avulsions of the extensor tendon) are almost always treated nonoperatively. Older injuries may fail to heal without surgical repair. The protocol for treatment of a mallet finger is the same no matter whether the patient has required pin fixation, open repair, or is being treated nonoperatively.

0 - 6 weeks:
- All mallets need x-ray to determine whether this is a soft tissue or bony mallet.
- Pain medication: NSAIDs encouraged for soft tissue mallets. Limited narcotic pain medications as needed for sharp lacerations.
- Splinting: A Mallet splint is fitted holding the DIP in full extension for continual wear. This is a piece of alumifoam splint that has had its padding removed and is then wrapped in 2-3 layers of Coban. This splint may be used on either the dorsal or the volar surface of the digit and is secured using a single piece of Coban. Stack splints are bulkier and more intrusive in daily activities and are therefore not preferred. For patients who have their hands in water routinely through the day, a “mallet mender” type splint may be useful.
Follow-up visit at 2 weeks for skin check.

Patient education: The patient is instructed never to let the DIP joint flex when removing the splint for hygiene. Donning and doffing is demonstrated and the patient encouraged to alternate which side they use for the splint during the day.

--- follow-up at 2 weeks---

- Skin check. Review donning/ doffing behaviors (patient to demonstrate).
- X-ray for bony mallets (3 views of finger)
- Work note: 5# weight lifting in splint. May type and write.
- Follow-up in 4-6 weeks (4 weeks for acute mallet, 6 weeks for mallet >3 weeks old at presentation). Patient instructed to wear splint 4 hours on, 4 hours off during the day and then full-time at night, starting the day before follow-up.
- If patient is developing a swan-neck deformity, refer to hand therapy for a “kissing” dorsal block splint in full DIP extension and allowing -20 degrees of PIP extension.

6 - 8 weeks follow-up---

- Skin check.
- Check for extensor lag >10 degrees. If present, then continue with full time extension splinting x 2 more weeks.
● When lag <10 degrees, instruct in weaning parameters.
  ○ 4 hours on and 4 hours off, full-time at night x 2 weeks.
  ○ 4 hours off and 4 hours on during day, full time at night x 2 weeks.
  ○ Nighttime only x 2 weeks.
● Work: No functional limitations. Must wear splint x 4 more weeks.
● Therapy referral: 1 visit scheduled in 2 weeks for gentle passive range of motion, blocked AROM, and grip strengthening. Modalities prn. HEP

-- final follow-up at 12 weeks--
● Assess ROM
● Skin check.
● DASH score
● Work note: no restrictions.