Infectious Finger Tenosynovitis

Infection of the finger tendon sheath generally occurs because of a puncture wound which introduces bacteria into the tendon sheath. The tendons bend the fingers. The tendons are housed in tunnels called sheaths. These sheaths keep the tendons aligned with the finger joints.

CAUSES

When a puncture wound introduces bacteria, the closed space around the tendons can become the site of infection. Wounds are often the result of:

- Sharp objects such as a nail.
- An animal bite.
- A human bite.

SYMPTOMS

The body sends white blood cells into the area to kill the bacteria. This process will produce inflammatory chemicals which cause:

- Swelling.
- Decreased motion.
- Severe pain with any motion of the finger.

Following the puncture wound the finger becomes increasingly swollen and warm. Pain with any motion soon follows. Red streaks may form on the skin which can move up into the forearm. Fever and chills usually result. **This is an emergency and medical attention should be sought urgently.**

DIAGNOSIS

Your caregiver will easily make this diagnosis on examination.

TREATMENT

- A splint may be used on a short term basis. Follow your caregiver's instructions on when and where to remove the splint for exercising the finger.
- The finger is usually splinted for a brief period of a few days while antibiotic therapy is initiated. Once the swelling, redness and warmth is improved, motion of the finger is begun.
- If the diagnosis is not clear your caregiver may prescribe antibiotics and ask you to follow-up within 24-48 hours for a repeat examination.
- Your caregiver may insert a needle in the tendon sheath (*aspirate*) to get a culture for the purpose of directing antibiotic therapy.
- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver.
- Surgery is another treatment that is frequently used if the diagnosis is clear. Small incisions are made along the palm and in the finger. A catheter is inserted to irrigate the tendon sheath after a culture is obtained.
- Occupational or hand therapy is often required to eliminate stiffness remaining in the finger.

COMPLICATIONS

Complications may occur. They include:

- Recurrence of the infection. This does not mean that the surgery was not well done. It means that the bacteria were not completely eliminated by the surgery and antibiotics. Repeat irrigation in the operating room may be required.
- Permanent stiffness of the finger can result if you do not follow through with instructions on exercises or fail to report for your occupational or hand therapy appointments.

SEEK IMMEDIATE MEDICAL CARE IF:

If the swelling, redness, warmth and pain with motion recur, especially if accompanied by a fever of greater than 101° F (38.3° C).

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