

Hand Surgery:
Infectious Disease:

Finger Injection Causes Infection; Delayed Drainage of Pus Destroys Tendon

This 43-year-old working man developed some "triggering" of the fourth finger on his right hand. This occurs when there is swelling involving the tendon and the sheath (like a pulley) through which it passes. The initial treatment is rest, elevation and some anti-inflammatory medications.

If the problem persists, then a steroid injection of sterile medication under the most sterile conditions is acceptable. As you noted all those records are not available.

His finger began to swell, was painful, and inflamed after three days. One week after the injection he saw Dr. John on 6/1 where this problem was noted and he apparently had been taking the antibiotic erythromycin and the pain medication percocet, without relief.

An infection from a finger injection is potentially very serious because it can destroy the tendons and their pulley sheaths as occurred here, and can also spread into the hand and via the tendon sheath, into the other fingers and wrist, which did not occur. Also, the joint can become infected, which also did not occur.

You noted that Dr. #1 sent the patient to the E.R. for an antibiotic injection (Rocephin), and placed him on a more potent oral antibiotic (Cipro) for two weeks and a narcotic (Percodan) for pain. He did not aspirate the infected area (using a needle and syringe) to look for pus and culture it to find the nature of the germ and the best antibiotics to kill it, nor did he open up the would to drain this obvious infection which was caused by the injection the previous week, nor did he obtain a consultation, or an MRI of his hand. The failure to intercede in my opinion is a departure from the standards of care.

The best opportunity for minimizing the devastating effects of the infection was lost. I am missing that E.R. record. Was he seen by the E.R. doctor? If so, that Physician, E.R. Corporation and hospital also would be negligent.

On 6/21 his fourth finger was "hot to touch, swollen and inflamed" and the next day he was seen by an Orthopedic Surgeon, Dr. #2, who felt that: "It appears that the infection is under control." Obviously it was not, and nothing would make such a major difference in this severe infection in one day. In my opinion, based on the history and previous day's findings, all of the previously mentioned care should have been undertaken.

She noted in her 6/29 office record that he had increasing symptoms that required I & D (incision and drainage).

Finally he was hospitalized for surgery on 6/29 by Dr. #2, and on 6/30 he had the superficial (sublimis) flexor tendon excised because it had become gangrenous (necrotic) from the infection. Also "the flexor profundus (deep tendon to the end of the finger, and the more important one for full flexion) was intact but without blood supply presumably across the area of the necrotic sublimis" which predicted that it too would die (gangrene). She excised the necrotic sublimis tendon and sutured the wound closed loosely over a drain. The surgery was acceptable, but weeks too late!

Although no germs grew out by laboratory analysis, they were seen under the microscope (gram stain). The antibiotics helped to kill most of them, but not before all the damage was done. Tendon has a poor blood supply, and infection will clot off (thrombose) its fine blood vessel supply, resulting in the necrosis that occurred, and the dying and dead flesh will promote infection. Also, the initial steroid injection will depress the local area of the body's ability to fight infection. That is also why earlier diagnosis and intervention is needed.

In my opinion there was the potential for an unsterile injection by Dr. #3 depending upon how thoroughly the finger cleansed and with what antiseptic prior to the injection, the sterile maintenance of the steroid if it was a multi-dose vial, its manufacture, and the technique used. Skin and its sweat glands do contain germs and they are not always eliminated by antiseptics, allowing the needle to drag them deeper.

When he presented to Dr. #1 one week later, that care was negligent in my opinion for all the reasons stated. The delay of one additional week by Dr. #2 may have made the difference in saving the profundus tendon.

It looked as if the infection was going to resolve but required further drainage and excision of dead tissue (debridement) on 7/13. An attempt to reconstruct the tendon pulley was performed, but would have minimal success in the midst of that infected and inflamed flesh (tissue), and placing sutures (foreign bodies) under those circumstances is highly questionable, and can worsen the infection and its consequences. It failed.

On 7/21 Dr. #4 was consulted and created a splint.

On 9/13 Dr. #2 removed 3 cc (1/30 of an ounce: 3/5 of tsp.) of pus by needle aspiration.

On 9/15 Dr. #4 noted that his flexor digitorum profundus (FDP) tendon function was intact at that time.

But on 10/22 he operated and excised a necrotic deep profundus tendon confirmed by the pathology report. Germs (coagulase negative staphylococcus) were present in this chronically inflamed wound that had never fully healed.

After adequate time for the infection to resolve, Dr. #4 operated on 4/4 to insert a silicone rod from the wrist area into the finger to help create a tunnel through which a tendon graft could be placed, months later. He also used a piece of wrist tendon (palmaris longus) to reconstruct the pulley sheaths in the finger that were destroyed by the infection.

The on 11/10 he used a piece of foot tendon to serve as the new profundus tendon and placed it in the sheath by attaching it to one end of the silicone (Hunter) rod as he removed it, and sutured each end to recreate a functioning flexor muscle / tendon/ finger unit.

In my opinion, all the care by Dr. #4 was quite good.

The main negligence as the cause of the devastation was caused by Dr. #1 with one questionable week by Dr. #2. I raised concerns re: Dr. #3.

What is his present hand function? Obtain photographs with his hand opened and closed.

I would suggest that you authorize us to obtain Expert Reports by Physicians specializing in Hand Surgery, Infectious Disease, and the same specialty of Dr. #1 (whatever that may be).