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Carpal Tunnel Syndrome: A misdiagnosed case

By Dr. David Lee, Chiropractor, Masters ART provider

History

Angie is a 42-year-old female who came into my office complaining of right hand and wrist pain. She has had this pain for several months and it had been getting progressively worse over time. She had pain, numbness, and tingling in her right hand, mainly in her 4th and 5th fingers, which was exacerbated with typing and mousing.

Prior to seeing me, she had visited her medical doctor who suspected she had carpal tunnel syndrome. Her doctor then referred her to a neurologist who did a nerve conduction test on her. After completing the test, the neurologist confirmed that she did have carpal tunnel syndrome and suggested that surgery was the best option for her. So Angie went ahead and booked an appointment with a surgeon to cure her pain.

Angie however, wasn't comfortable with the idea of getting surgery, so she started to explore her options to see if there was an alternative way to fix this problem. She then spoke to one of my previous patients who recommended that she come and see me.

Examination / Treatment

Examination revealed that Angie was having numbness and tingling in her 4th and 5th fingers of her right hand. This is usually not consistent with carpal tunnel syndrome, so I started to explore other areas of her body that may be causing these symptoms. After probing around her neck, shoulders, arm, and hand, I was able to reproduce the symptoms in her hand by pushing in the back of her arm in her triceps muscle.

This was clearly the site of her injury. I proceeded to treat her triceps muscle using a special soft tissue technique called Active Release Technique (ART). She noticed a significant improvement immediately after her first treatment. I continued to see her for 4 more visits over the next couple of weeks, at which time her symptoms were completely resolved. Angie no longer required surgery and to my knowledge has been symptom free since.

Carpal Tunnel Syndrome

I would like to first explain what carpal tunnel syndrome really is. On the palm side of your wrist you have a ligament called your transverse carpal ligament (see figure 1). There are many structures that run underneath this ligament, including your median nerve. Carpal tunnel syndrome occurs when the structures underneath the transverse carpal ligament become compressed, thereby putting pressure on this median nerve. This can then cause pain and numbness in the thumb, 2nd, 3rd, and part of your 4th finger.

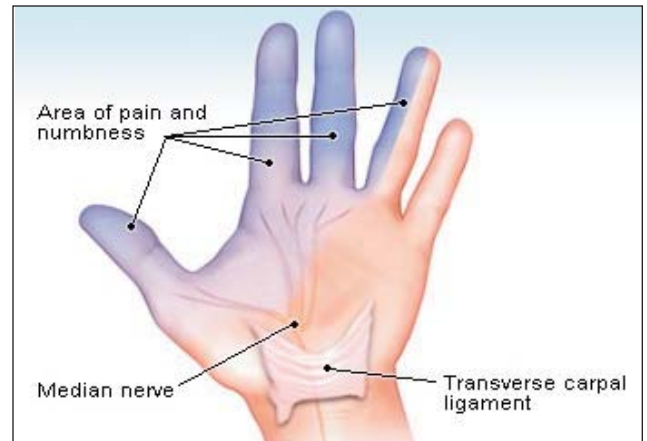


figure 1

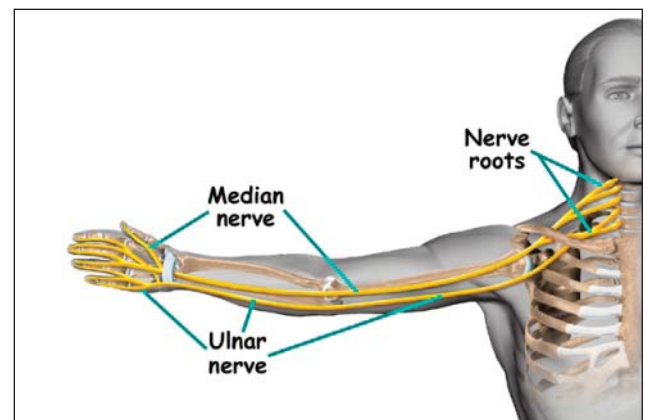


figure 2

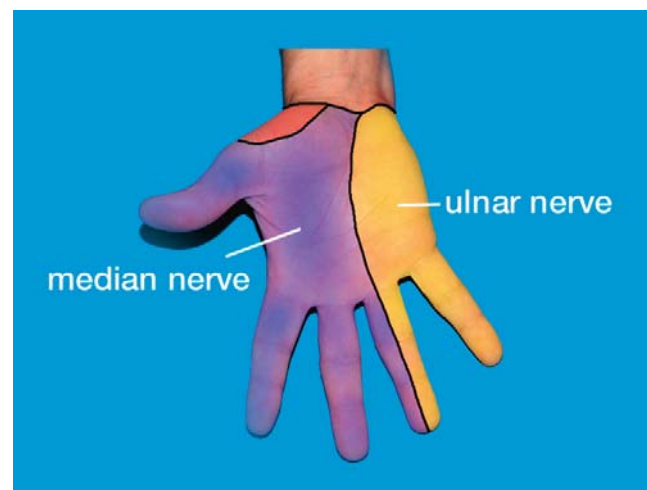


figure 3

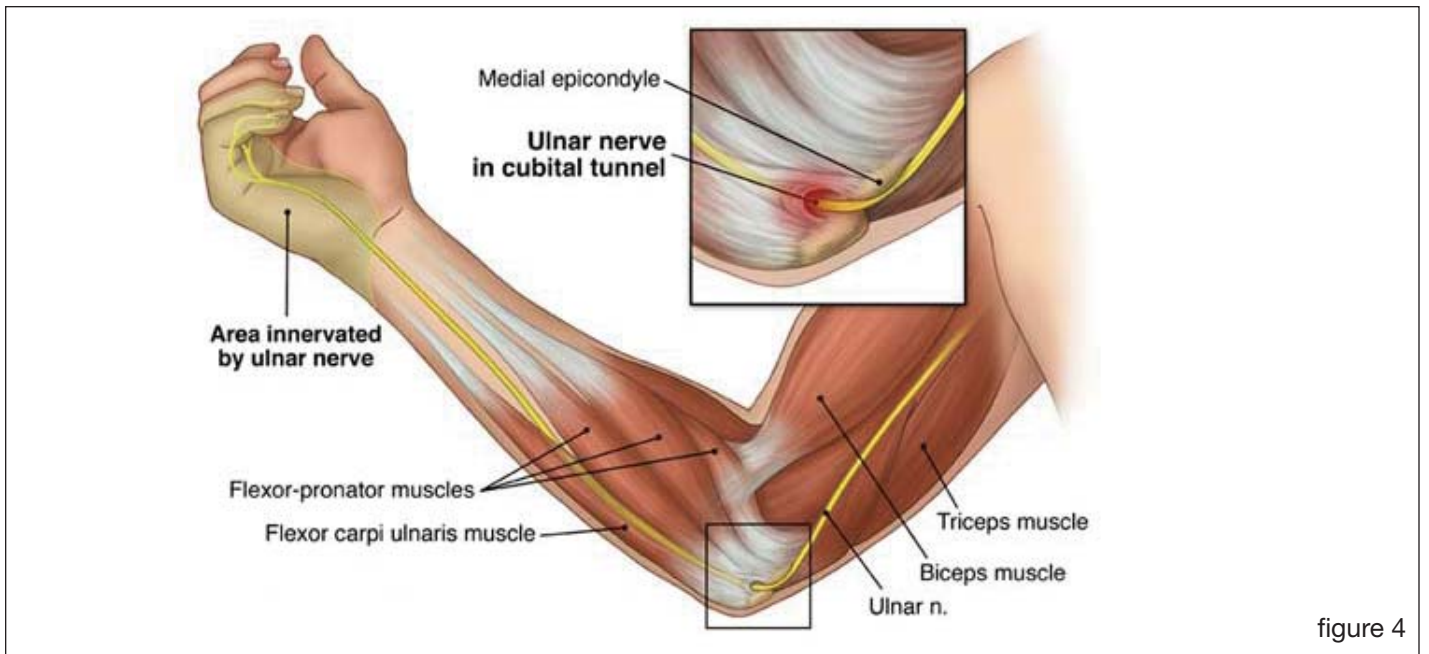


figure 4

Cubital Tunnel Syndrome

Angie on the other hand did not have the same pain pattern that normally presents with carpal tunnel. The symptoms in her hand were consistent with another nerve that runs down your arm called your ulnar nerve (see figure 2). As you can see in figure 3, the ulnar nerve pain pattern runs along the 4th and 5th fingers, consistent to Angie's symptoms.

Now that we knew what nerve is involved, the next step was to figure out the site of her nerve entrapment. There are several sites in your body that can entrap the ulnar nerve, including areas in your neck, shoulder, chest, arm, forearm, wrist, and hand. As we mentioned earlier, Angie's ulnar nerve was entrapped under her triceps muscle, close to her elbow joint. The area in your elbow that the ulnar nerve comes out of is called your cubital tunnel, and if symptoms arise from this area it is usually diagnosed as cubital tunnel syndrome, which is what Angie had (see figure 4).

Causes of Carpal tunnel and Cubital tunnel syndrome

These syndromes are very common, especially for those of you that work in an office setting and have to work with a computer all day long. The cause of these and many other office related injuries is called repetitive motion disorder. Prolonged use of a muscle can lead to micro damage, leading to scar tissue formation. Over time this scar tissue can become larger and larger, leading to muscle dysfunction, which then leads to nerve entrapments.

Final thoughts

Unfortunately Angie's misdiagnosed case is very common. The main diagnoses many health practitioners make to anyone with hand pain is carpal tunnel syndrome. However there are many things that can cause hand pain that do not involve the carpal tunnel.

I was surprised that her nerve conduction test revealed that her median nerve was involved, leading to the diagnosis of carpal tunnel syndrome. This makes me question if the test was done accurately, or how valid nerve conduction tests are in making these diagnoses. Many of these nerve entrapment syndromes can be easily diagnosed with history and physical examination. So regardless of how accurate the nerve conduction tests are, it seems to me like an unnecessary test.

In terms of her recommendation for surgery, first of all I will state that I am not opposed to surgery for these conditions. There are times with very stubborn and extreme cases where surgery is required. However, surgery should always be a last resort, especially since many of them can be unsuccessful. There are many effective and conservative ways to treat these nerve entrapments including the technique I mentioned earlier: Active Release Technique (ART). All conservative treatments should be exhausted first before you consider going under the knife.

If you have any questions regarding this case study, feel free to contact me at the Adelaide Health Clinic.