

Orthopaedic Connection

Fracture of the Metacarpals

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Transforming patient information into patient understanding.

What is a Metacarpal?

A metacarpal is one of five long bones in the hand that join the fingers and thumb at the knuckles. In the upper part of the hand each metacarpal bone connects to the small carpal wrist bones.

As I have pointed out in a previous article, there are 27 bones in the hand and wrist. The whole structure is horribly complicated. Some Orthopaedic Surgery superspecialists spend their whole career taking care of only the hand and wrist! Imagine!

Often Injured

Metacarpal bones are the most common hand and wrist bones injured in adults. In children the phalanges or finger bones are the most often injured.

Of the 5 metacarpals the most often fractured is the fifth one, that is the one on the little finger side.

If people would stop punching walls and each other, there would be a lot less hand fractures for me to take care of!

A fracture of the fifth metacarpal has been termed “Boxer Fracture” appropriately.

Signs and Symptoms

Well, for starters there is always a history of trauma. Swelling and tenderness over the top of the hand make me very suspicious that a fracture will be found underneath! If the finger looks shortened or the knuckle depressed the diagnosis is practically made.

Plain x-rays of the hand are next and 9 times out of 10 show a fracture.

What Else?

If a fracture does not show up on x-rays there are other possibilities.

- Bruising of tissues from trauma
- Sprain of the finger or knuckle
- Dislocation of one of the joints adjoining the metacarpal
- Infection in the hand

Treatment

If the fracture does not affect the joint and lines up OK (not displaced) casting is likely for 4 weeks or more.

Sometimes the metacarpal fracture affects the joint or is all out of position and is displaced. When this happens I usually have to do surgery to repair it.

Most of these fractures that don't line up properly are difficult to control without surgery. Surgery can include putting stainless steel pins in the bone or even a little plate and screws.

Each case of course is individual and what I do with one patient may not be the same approach in another.

Bad Outcome Sometimes

I don't like to dwell on the negative aspects, but there are some things you should know.

- Joint stiffness is a common problem
- Good position of the bones can be lost if patient uses the hand when told not to
- Pins placed at surgery can move and come loose in the bone
- Bone may just sit there and not heal (nonunion)
- Arthritis can set in at some point.

Hope

It's best to end on a positive note. In fact the great majority of metacarpal fractures do heal with proper treatment whether it is casting alone or surgery. I should mention that I always have to remove the pins after 4 – 6 weeks. By then the body has partly healed the fracture around the pins and it is safe to remove them.

Some people require physical therapy after healing to restore movement to the fingers, thumb and wrist. Many people, however can do all of the therapy on their own.

Hope you learned something this week about hand injuries.

My patients put their trust in me and what I do improves the quality of their lives.

Office Website and Gratiot County Herald Archive

What if there was a whole world of musculoskeletal information at one place? There is!

www.orthopodsurgeon.com opens up for you the office Website, Your Orthopaedic Connection and the Archive of all previous GCH articles I have written for you, your family and friends.

Please check it out. Do yourself a favor.

Be well.

Dr. Haverbush