

Abraham Colles

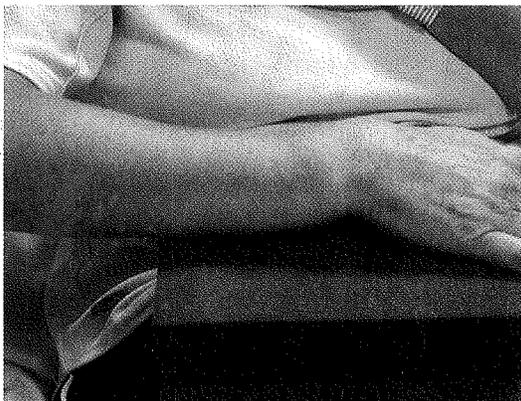
and his fracture

Eighteenth- and nineteenth-century physicians were notorious for attaching their names to various diseases, injuries, and body parts. The Irish surgeon Abraham Colles was prolific in this regard, his name immortalized by at least two separate tissues in the abdomen. Colles is most famous, however, as the namesake of a very common fracture of the arm.

Colles fracture is sometimes referred to as a fracture of the wrist, although that is not technically correct. The wrist is a joint, and joints cannot be fractured. Colles fracture occurs just above the wrist, and involves the two bones of the forearm. The larger of these, the *radius*, is on the thumb side, while the *ulna* is the smaller bone on the little-finger side. The radius and ulna are separate bones, but they are very tightly connected to each other. Thus, a fracture of one typically affects the other.

Colles fracture is the most common fracture of adults. The vast majority occur following a fall onto the outstretched hand. Hiking on uneven terrain, especially when fatigued and carrying a pack, is a prime set-up for a Colles fracture. (Children, whose bones are much less brittle than ours, typically get a “greenstick” fracture from the same type of fall.)

This fracture is usually easy to diagnose. In fact, Mr. Colles (British surgeons still refer to themselves as “Mr.” rather than “Dr.”) described the fracture beautifully nearly a century before x-rays were available. There is tenderness and bruising, usually about an inch above the wrist joint. Most often, the bones are separated by the break and cause a characteristic deformity, sometimes likened to a dinner fork. Fortunately, this fracture rarely causes disruption of blood supply or nerves, so compli-



Photos available:

www.wikiradiography.net/page/Colles%27+Fracture+Radiography?t=anon

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cations in the field are rare. Field first aid consists of splinting the wrist. If a malleable aluminum splint (“Sam splint”) is in the first aid kit, it is ideal for this type of fracture.

Otherwise, there are many improvised ways of splinting a Colles fracture. Most important for any of these is ensuring that the fingers and thumb are in the “position of function” before wrapping the lower arm. Having the victim hold an Ace bandage in the hand is an effective way to do this. Once the hand is positioned, the hand and lower arm can be wrapped by strips of a cut-up closed foam sleeping pad, for example. Leave the finger tips exposed to check for warmth and circulation. A simple sling completes the first aid.

Definitive treatment of this fracture requires manipulation under anesthesia. Thus, victims need to get out for care. Unless there are associated injuries, Colles fractures are appropriate for “walk-out” evacuation. Remember, though, that the patient will have trouble balancing with one arm out of commission, so assistance with walking is mandatory. You don’t want another injury!

Tom Welch, MD, is professor and chair of pediatrics at Upstate Medical University in Syracuse. He is a licensed professional guide, an active member of the Wilderness Medical Society, a certifying instructor for the Wilderness Education Association, and has guided groups in the Adirondacks, Montana, and Alaska. More information is available on his website, www.adirondoc.com. William Lavelle, MD, associate professor of orthopaedic surgery at Upstate, reviewed this column and provided helpful comments.