

# Destructive Arthritis of the Hand After Diving

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Destructive infectious arthritis can result after joint impact, even without obvious trauma.

A previously healthy 27-year-old woman woke up with extreme pain, redness, and swelling in her left hand. Redness and swelling had progressed rapidly from the red line on the first day to the blue line on the second day, and extended farther the next day (Figure 1A). She had no fever, but reported extreme pain and an inability to use her left hand and wrist. Three days prior, she went diving and hit the marine flora, but denied any penetrating trauma. The radiograph of her left hand showed soft tissue swelling at the wrist, but no other abnormalities (Figure 1B). C-reactive protein was noted at 56 mg/l and erythrocyte sedimentation rate at 28 mm/h. Blood culture, synovial fluid, and tissue cultures were negative, including mycobacteria. Her immunologic work up was unrevealing.

Sixty mg of prednisone decreased the swelling, but the patient continued to experience pain, and she was not able to

use her hand. No other joints were affected. The patient received vancomycin IV and responded with a complete resolution of the swelling, redness, and pain in her hand and wrist. The vancomycin treatment was given for a month. The subsequent radiograph of the left hand 6 months later showed extensive erosive arthritis with ankylosis at the carpal level (Figure 1C). She has maintained a limited range of motion in her left hand and wrist. The acute onset after diving and the marked response to antibiotics make this episode a likely example of destructive infectious arthritis<sup>1,2</sup>.

## REFERENCES

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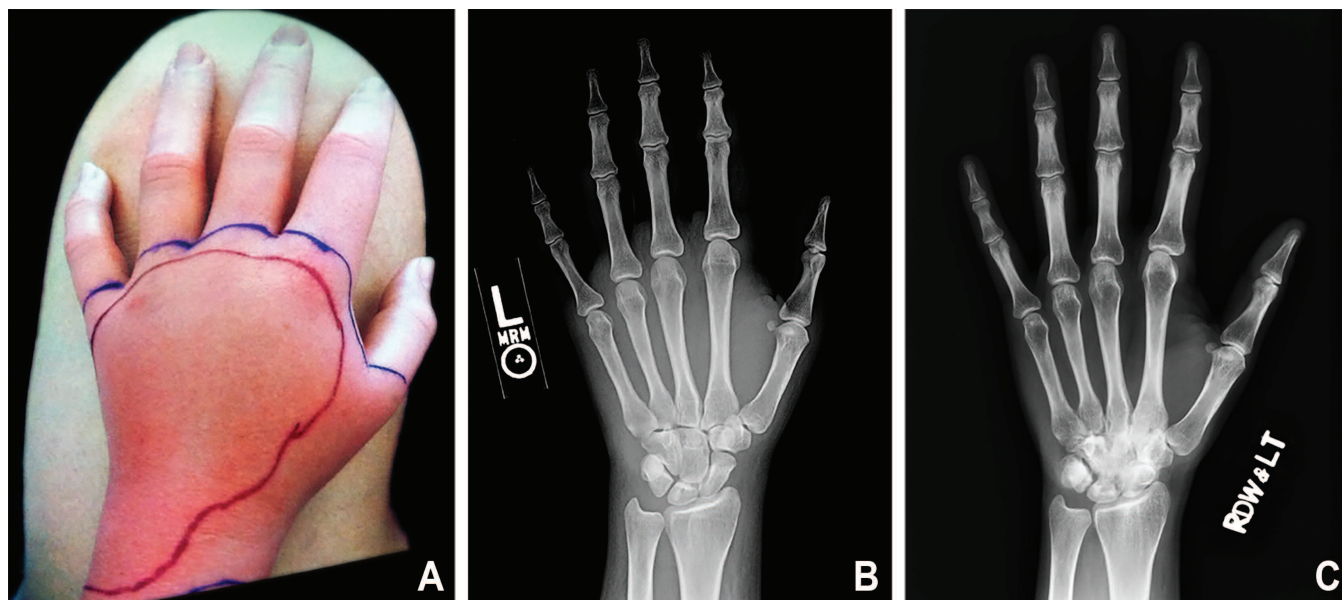


Figure 1. A. Redness and swelling had progressed rapidly from the red line on the first day to the blue line on the second day. B. Radiograph of left hand showed soft tissue swelling at the wrist, but no other abnormalities. C. The subsequent radiograph of the left hand 6 months later showed extensive erosive arthritis with ankylosis at the carpal level.