Acute calcifying tendinitis at the metacarpophalangeal joint—a case report

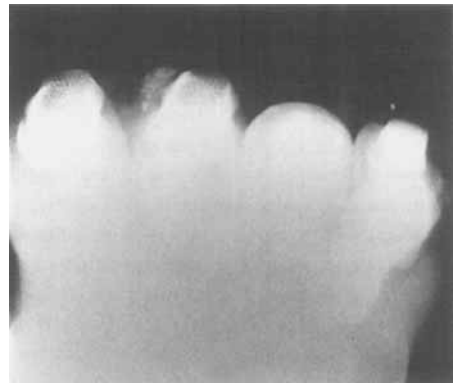
Konstantinos A Giannikas and Maher El-Hadidi

Orthopaedic Department, Western Isles Hospital, Stornoway, Isle of Lewis, Scotland. Correspondence: Mr K Giannikas, 4 Cromarty Close, Mansfield, Notts NG 19 6 RT, UK. Tel work +44 1623-22515, home -424537
Submitted 97-05-19. Accepted 97-07-03

A 35-year-old woman presented with a swelling accompanied by severe pain in the metacarpophalangeal region of the third finger of the right dominant hand. She had a minor injury 3 weeks before and then pain gradually increased. There was a soft tissue swelling with local erythema and increased local temperature in the web space between index and middle finger. Tenderness was maximal over the dorsal and radial aspects of the third MCP joint. Passive movements were painful.

Radiographs showed a small calcified nodule at the point of maximal tenderness (Figure). Hematologic and biochemical investigations, including full blood count, erythrocyte sedimentation rate, calcium and phosphate, were normal. The diagnosis of acute calcifying tendinitis was suggested and management with splintage, elevation, analgesia and ultrasound was decided on.

After 3 days, there was no improvement and at surgical exploration a calcified 0.5 × 0.5 cm toothpaste-like material was found on the collateral ligament at the third MCP joint level and was curetted. Laboratory investigations revealed a composition of calcium carbonate and phosphate. Pain was immediately relieved and there was full recovery after 1 week.



Discussion

Acute calcifying tendinitis in the hand was first recognized by Cohen (1924), who described it at the insertion of flexor carpi ulnaris. Later reports have described this condition in other tendinous structures in the hand and wrist (see references). It presents with pain, swelling, erythema and decreased function secondary to pain. There is usually a history of trauma, stress or strenuous use of the hand or the wrist. Occasionally elevated temperature may be noted. The sedimentation rate and the white blood count may be elevated. The pathognomonic finding is the radiographic calcification, which follows the course of the involved tendon.

This condition has been attributed to dystrophic calcification. Trauma and repeated stress are thought to lead to tears in the tendon fibers, with subsequent calcification.

The natural history of this process is one of spontaneous resolution. Untreated, symptoms remain for an average of 3 weeks. Nonoperative management is recommended.

References

Carroll R E, Sinton W, Garcia A. Acute calcium deposits in the hand. J Am Med Assoc 1958; 157: 422-6 .

Cohen I. Calcareous deposits at the insertion of flexor carpi ulnaris following trauma. Am J Surg 1924; 38: 172-3.

Gondos B. Calcification around the wrist associated with acute pain (Periarthritis calcarea). Radiology 1953; 60: 244-51.

Gren T L, Louis D S. Calcifying tendinitis in the hand. Ann Emerg Med 1980; 9 (8): 438-40.

Martin J F, Brogdon B G. Peritendinitis calcarea in the hand and the wrist. Am J Roentgenol 1957; 78: 74-85.

Seindenstein H. Acute pain in the wrist and hand associated with calcific deposits. J Bone Joint Surg (Am) 1950; 32: 413-8.

Uhtoff H K, Sarkar K, Maynard J A. Calcifying tendinitis — A new concept of its pathogenesis. Clin Orthop 1976; 118: 164-8.

Wulle C, Heim U. Peritendinitis Calcarea an der Hand, ein kasuistischer Beitrag. Handchir Mikrochir Plast Chir 1990; 22 (2): 92-5.