

CARPAL BOSS CAUSED BY AN ACCESSORY CAPITATE CASE REPORT

I. F. J. TIELLIU, P. A. J. VAN WELLEN

A carpal boss is frequently caused by a bony anomaly of the quadrangular joint of the carpus. We present the case of a patient with a carpal boss caused by an accessory capitate.

Key words : carpal boss ; accessory capitate ; wrist.
Mots-clés : carpe bossu ; grand os accessoire ; poignet.

CASE REPORT

A 55-year-old man slipped and fell on his right extended hand while walking by the swimming pool. He complained of pain in his right wrist, aggravated by flexion and extension movements. He had never experienced wrist pain before the accident. On examination we found a painful hard dorsal eminence at the base of the third metacarpal bone. Anteroposterior and lateral xrays initially showed no clear bony abnormalities. The potential diagnosis of a synovial cyst or carpal boss was made. The wrist was immobilized in a plaster cast for three weeks, and non-steroidal antiinflammatory drugs were prescribed. Surgical exploration was performed six weeks after the initial trauma since incapacitating pain persisted. We found a bony protuberance at the base of the third and fourth metacarpal bone with an overlying ganglion. With the removal of the ganglion an accessory bone which articulated with metacarpals three and four and with the capitate and hamate was found. The articular surfaces were covered with intact cartilage. There were no signs of a degenerative osteoarthritic process. The accessory bone was removed, and the intercarpal ligaments were carefully approximated. A plaster cast was applied for three weeks. Retrospective analysis of

the x rays revealed an accessory capitate (Figs. 1, 2). On follow-up the patient had recovered well, and motion of the wrist was painless and complete one year after the operation.

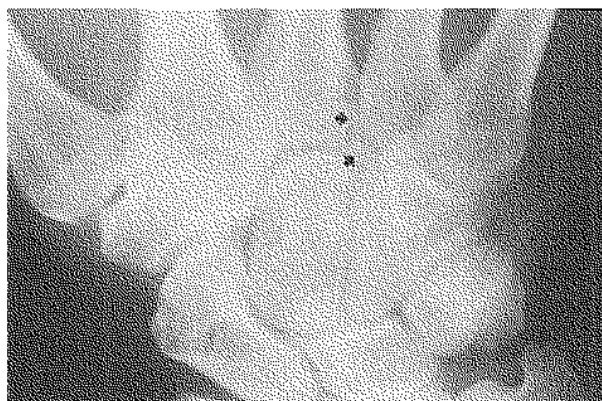


Fig. 1. — Radiograph of carpus of the right hand with accessory capitate at the capitate-hamate-metacarpal joint (→).

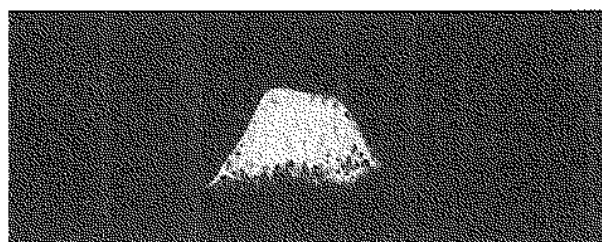


Fig. 2. — Radiograph of the removed accessory capitate, showing three of the four intact articular surfaces ; the base of the ossicle is the dorsal side.

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DISCUSSION

The carpal boss is described as a bony protuberance localized at the carpometacarpal region at the base of the index and middle finger metacarpal bones, on the dorsum of the hand (3). Symptoms arise from a degenerative osteoarthritic process, a ganglion or an inflamed bursa that may develop over the bony prominence, or from an extensor tendon slipping over it (1). Optimal radiologic visualization can be obtained by a modified lateral view of the wrist with the hand flexed and supinated 30 to 40° with ulnar deviation of 20 to 30° (2, 3).

Cuono and Watson showed that more than two-thirds of patients with a carpal boss have a bony anomaly in the region of the quadrangular joint at the base of the index and middle metacarpal bones where they articulate with the trapezoid and capitate : a styloid or a variant (3).

Accessory ossicles alter the normal biomechanics of the surrounding joints. Repetitive stress therefore causes degenerative osteoarthritis with development of an overlying bursa (1, 2). As in our case minor trauma can initiate or aggravate the symptoms of the underlying pathology.

We describe the case of a patient with a symptomatic carpal boss caused by an accessory carpal bone : the accessory capitate. This ossicle is very rare and is situated between metacarpal bones III and IV and the capitate and hamate. It is briefly described by Köhler (4) but extensive review of the literature did not reveal previous descriptions of an association with a carpal boss. A carpal boss can thus be caused by a bony accessory element at the capitate-hamate-metacarpal joint. Resection proves to be curative.

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SAMENVATTING

I. F. J. TIELLIU, P. A. J. VAN WELLEN. Carpal boss door een os capitatum secundarium.

Een „carpal boss” wordt meestal veroorzaakt door een afwijking ter hoogte van het gewricht tussen metacarpaal II en III en het os trapezoideum en capitatum. Vaak gaat het om een os styloideum of een variant ervan. De klachten worden veroorzaakt door lokale osteoarthrose, een synoviale cyste of een geïnflammeerde bursa. Wij stellen het geval voor van een patient met een carpal boss veroorzaakt door een os capitatum secundarium, symptomatisch na een mineur trauma. Het os capitatum secundarium ligt tussen metacarpaal III en IV en het os hamatum en capitatum. Het is zeldzaam en werd nooit eerder in deze context beschreven.

RÉSUMÉ

I. F. J. TIELLIU, P. A. J. VAN WELLEN. Carpe bossu en rapport avec un grand os accessoire : présentation d'un cas.

Le carpe bossu est fréquemment en rapport avec une anomalie osseuse au niveau de l'articulation carpo-métacarpienne des 2^{ème} et 3^{ème} rayons. Les auteurs rapportent le cas d'un patient qui présentait un carpe bossu en rapport avec un grand os accessoire.