

# “Bossing” of the second and third Carpo-Meta-Carpal joint

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Dear Colleague,

**Re: Your patient with a hard tender swelling on the dorsal aspect of his right hand**



Thank you for your referral of Mr. R G, a twenty-eight year old right-handed policeman who is a keen sportsman. He complains of pain in his right hand, which has been present for quite some time. He cannot remember a specific traumatic incident but the pain has troubled him for at least three years. The pain is more pronounced when he does push ups i.e. when the hand is pushed into dorsi-flexion. He has noticed the swelling in the last two years, which is hard and tender with palpation. The swelling is at the base of the index and middle finger meta-carpals. His power in the hand is otherwise normal and he has no other painful lesions or joint involvement.

On **examination**, one finds a hard swelling over the second and third carpo-meta-carpal joints. The typical pain can be elicited when the two meta-carpals are pushed into dorsi-flexion. One can also feel a slight crepitus of the extensor tendons as they move over the swelling with flexion and extension of the fingers. The neurovascular examination of the hand is essentially normal.

The only **special investigation** necessary was a plain x-ray of both hands. On the lateral view, one can clearly see osteophytes on either side of the dorsal aspect of the second and third carpo-meta-

carpal joints (fig. 1). There is also a soft tissue swelling present directly over the bony prominence. The rest of the hand skeleton is normal. The **diagnosis** is a so-called “bossing” of the second and third carpo-meta-carpal joint.

The **management** should be conservative in the first instance. A wrist-supporting splint with anti-inflammatories may be of benefit to suppress the acute inflammation. This may be sufficient to relieve Mr. G of his chronic pain. However if the conservative management fails, a local debridement of the osteophytes should be done. One would remove bone slightly beyond the normal edge i.e. create a saucer-like depression over these carpo-meta-carpal joints (CMC joints). Intra-operatively, one should make absolutely certain that no impingement is present when the second and third metacarpals are manipulated i.e. moved up and down. The raw bony area should be covered with a thin layer of bone wax. The **postoperative management** is a simple POP splint for two weeks. Some discomfort may persist for a few weeks.

## Discussion

Bossing of the second and third carpo-meta-carpal joints may be due to sub-periosteal reaction as a result of acute or chronic injury especially in athletes who forcefully dorsi-flex their wrists such as gymnasts and contact sports people. This is a benign condition and is more annoying than serious. Simple excision and debridement of the dorsal aspect of the joints is all that is required to permanently solve the problem.

## Legend: “Bossing” of the CMC II and III joint

On the lateral view of the wrist “kissing” osteophytes may be seen at the dorsal aspect of the second and third carpo-meta-carpal joints. These are not always evident, especially when they are cartilaginous, but the swelling over these joints is nevertheless tender and diagnostic.