Os Radiostyloideum- Misdiagnosed as fracture in the Emergency Room

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Abstract

The author reports a case of Os radiostyloideum, misdiagnosed as fracture of the radial styloid, and subsequently managed with a back slab, in the emergency room.

Introduction

Accessory ossicles in the wrist often create confusion to the clinician in the emergency room, and a diagnosis of skeletal injury is made. They are just incidental findings in the trauma series radiographs and all clinicians should be aware of the common accessory ossicles. The author reports a case of Os radiostyloideum in a 26-year-old male patient, who presented with trauma to the right wrist in the emergency room.

Case Report(s)

A 26-year-old male patient was seen in the emergency room of a level 2 trauma centre with history of fall on out-stretched hand and pain right wrist. He was attended by the emergency room clinician, who found him having tenderness over the radial styloid, and a postero-anterior radiograph of the wrist was made to rule out skeletal injury. Radiographs of the wrist showed an abnormality of the radial styloid which was diagnosed as fracture of the radial styloid. His wrist was immobilized in a back slab.

Patient reviewed in the orthopaedic clinic a week later. He was found to have normal movements of the wrist and there was no tenderness over the radial styloid. A diagnosis of accessory ossicle, Os radiostyloideum, was made, which was confirmed with an oblique radiograph of the wrist.

Since the patient was asymptomatic he was reassured and advised to follow up in the clinic in case of recurring pain in the wrist.

Discussion

Accessory carpal bones are rare findings in radiographs with an incidence of 0.3-1.6%. They are found incidentally in trauma series radiographs and are of no clinical significance in most of the cases[1,2]. If the clinicians are not aware of the condition these ossicles may be misinterpreted as fractures leading to unnecessary treatment. Multiple ossicles may be a cause of wrist pain, due to irritation of tendons, ganglion formation, or by mere crowding of the wrist resulting in restriction of carpal movements as in the case of ‘crowded wrist’ reported by Kose et al[1].

A search in medline yielded only one previous case report of Os Radiostyloideum[3]. A separate ossification centre of the radial styloid process can persist and remain unfused in adult life. They do not form part of the wrist joint, and appear as small round bony fragments near the tip of the radial styloid. Antecedent trauma has been postulated as a cause of this anomaly, resulting in post-traumatic degeneration[3]. In cases of doubt, x-ray of the opposite wrist will confirm presence of the anomaly on that side too, as most of the cases are bilateral.

Accessory ossicle like Os styloideum when associated with dorsal wrist pain is called Carpe Bossu disease[4].

Conclusion

Awareness of normal variants and accessory ossicles around the wrist among the emergency room clinicians prevents unnecessary investigations and over treatment.

Authors contribution(s)

SSS prepared the manuscript, edited, managed the case
References

Illustrations

Illustration 1

Ia: Radiograph right wrist showing os radiostyloidium [white broad arrow] Ic: Left wrist ossicle
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