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# Hamate Fracture with Carpometacarpal Joint Dislocation Mimicking as Normal X-Ray Presentation

***Cheng-Hsun Chuang[1,2,3]; Hung Kai Lo[2,4]; Han-Wei Yeh[5,6]; Chao-Bin Yeh[1,2,3]****

*[1]Department of Emergency Medicine, Chung Shan Medical University Hospital, Taichung, Taiwan.*

*[2]Department of Emergency Medicine, School of Medicine, Chung Shan Medical University, Taichung, Taiwan.*

*[3]Institute of Medicine, Chung Shan Medical University, Taichung, Taiwan.*

*[4]Department of Orthopaedic Surgery, Chung-Shan Medical University Hospital, Taichung, Taiwan.*

*[5]School of Medicine, Chang Gung University, Taoyuan City, Taiwan.*

*[6]Medical Education Department, Chang Gung Memorial Hospital, Linkou, Taoyuan City, Taiwan.*

***Corresponding Author(s): Chao-Bin Yeh**

Department of Emergency Medicine, Chung Shan Medical University Hospital, No. 110, Section 1, Chien-Kuo N. Road, Taichung, Taiwan, ROC.

Tel: +886-4-24739595, Ext: 32170,

Fax: +886-4-24731521; Email: sky5ff@gmail.com

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## Clinical image description

A 26-year-old male presented to the emergency department after motor vehicle accident. Multiple abrasion wounds were noted over bilateral elbows, hands, knees. He also complained mild limited range of motion of right wrist and swelling. Right wrist X-ray revealed uneven articular surface of 5$^{th}$ carpometacarpal joint (Figure 1) and Computed Tomography (CT) was subsequently performed (Figure 2).

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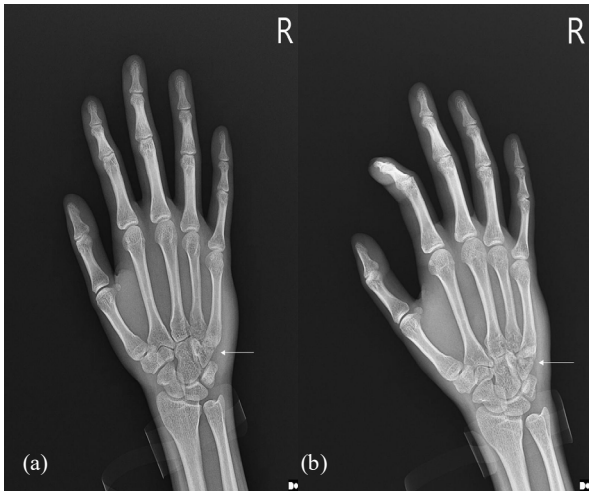


**Figure 1:** Anterior-posterior and oblique view of right wrist. Uneven articular surface of 5th CMC joint in comparison of other four CMC joints. Wrist fracture and cannot be definitely confirmed with suspicious bony chip fracture (white arrow; 1a: Anterior-posterior view and 1b: Oblique view).

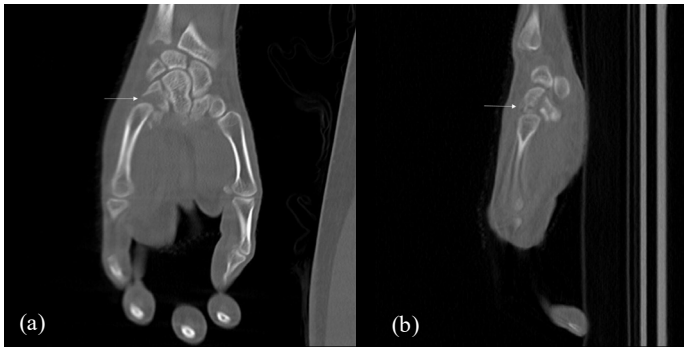


**Figure 2:** Computed tomography scan of right wrist. Hamate bony chip avulsion fracture with 4th and 5th metacarpal dislocation could be easily identified (white arrow; 2a: Coronal view and 2b: Sagittal view).

## Discussion

*Right hamate fracture (Milch Classification: Type IIB)* [1] *with 4th and 5th metacarpal dislocation.* Hamate fractures are rare, accounting for 2 to 4 % of carpal fractures, and often challenging problem in initial evaluation for emergency physician, especially association with Carpometacarpal (CMC) dislocation. The hamate, wedge-shaped bone, articulates with both 4th and 5th finger metacarpals, the triquetrum, the capitate, and the lunate [2]. The hamate fractures can be miss diagnosed due to overlapping of carpal bones [3]. Although different views of x-ray, as anterior-posterior view and oblique view might suggest more information, diagnosis could not be identified usually. CT with three-dimensional reconstruction image can play a role in assisting diagnosis of hamate fracture with 4th and 5th CMC dislocation [4]. Therefore, CT scan should be considered after initial evaluation of physical examination, clarifying of injury mechanism and X-ray showing narrowing of articular space or uneven articular surface of CMC joint. The patient was sent to operation room for open reduction and fixation with percutaneous pinning and discharge on the next day. The patient recovered well with reduction maintained during follow-up. K-pin was removed in later 2 months.

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