

Surf Board Related Costal Cartilage Fracture

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Received: 02 April 2019; Accepted: 27 April 2019

Citation: Patel B, Wullschleger M, Provenzano S. Surf Board Related Costal Cartilage Fracture. J Med - Clin Res & Rev. 2019; 3(2): 1-2.

A 53-year-old woman presented to the Trauma outpatient department with a painful left lower anterior chest wall lump. Pain was exacerbated whilst lying prone and affecting surfing as well as her routine sleep.

On history she was referred to the regional emergency department following being hit by her surfboard about 6 months ago and was discharged on oral analgesia.

On clinical examination there was an obvious deformity in the left lower anterior chest wall, painful with crepitus to palpation.

Computed tomography with 3D reconstruction of the chest wall was performed (Figure 1). The findings were suggestive of non-healing fracture of the 6th and 7th costal cartilages, with anterior dislocation of the sternal ends.



Figure 1: 3D Reconstruction of Chest Wall Computed Tomography scan.

Surgery was carried out on symptomatic grounds. Under general anaesthesia, a horizontal incision immediately below the deformity was made. The rectus muscle was spared and the anterior dislocated

costal cartilages were excised using a bone nibbler, maintaining the posterior pseudo-arthritis intact for stabilization (Figures 2 and 3). As we achieved a good cosmetic outcome associated with chest wall stability, we accepted this initial result with a view to assess pain/function in the outpatient department. Local anaesthesia was installed and wound closed in layers.

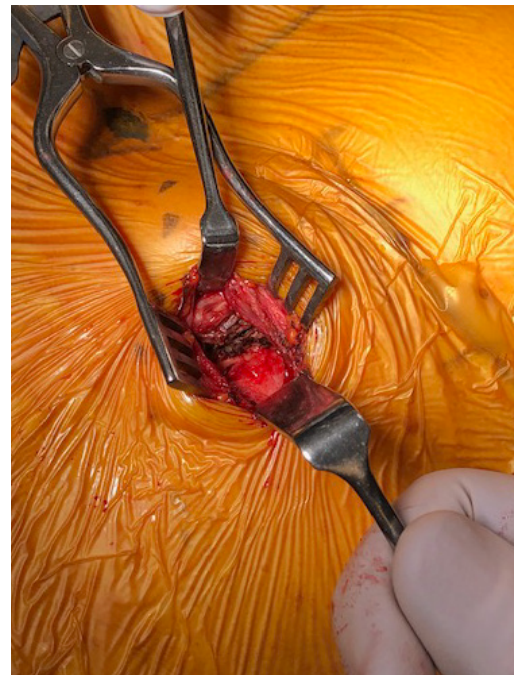


Figure 2: Intraoperative picture of deformity on the costal cartilage.

The patient was discharged home a few hours later. At 4-week and 3 months follow up, the chest deformity was completely resolved and the patient could assume prone position and surf again without significant pain.



Figure 3: Intraoperative picture of intact rectus muscle.

Discussion

Isolated costal cartilage fractures are rare and difficult to diagnose [1-4]. It has low incidence but high prevalence in contact sports [1,5-8].

Surfing underpins an important part of the Australian coastal fabric. Surfers most often sustain injuries to the leg, the head and face, the back, and the shoulder and arm. However, to our knowledge this is the first report on delayed presentation and successful invasive management of costal cartilage fracture in the surfing community. Had the initial procedure not produced reasonable results, resection of the pseudo-arthritis would be the next step.

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