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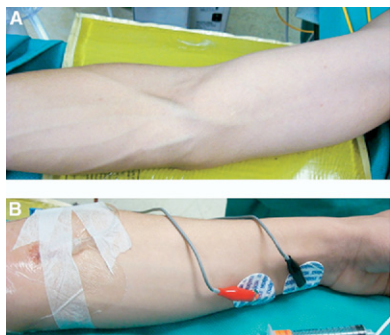


Figure 1. A, Right upper extremity veins are engorged because of elevated right subclavian venous pressure. B, Left upper extremity veins are normal.



Figure 3. Plain chest radiograph was interpreted as normal.



Figure 2. The right clavicle is depressed, but the shoulder is elevated and protracted.

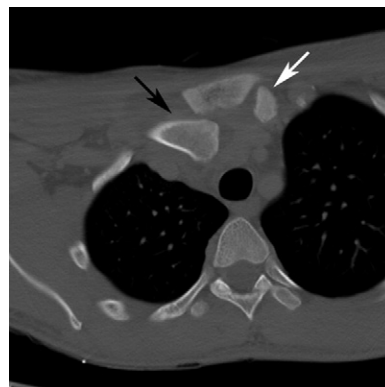


Figure 4. CT of the right clavicle posterior to the sternum (black arrow) compared with the normal left clavicle (white arrow). Used with permission of Nikolaj Wolfson, MD, FRCSC, Department of Orthopedic Surgery, Keck School of Medicine, University of Southern California, USC/LAC Medical Center, Los Angeles, CA.

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A 24-year-old man presented to the emergency department with pain in the right sternoclavicular area and difficulty swallowing. He reported injuring his right shoulder in a fight at a soccer game 9 days before presentation. Physical examination revealed venous engorgement of the right upper extremity compared with the left (Figure 1) and a depressed right clavicle with an elevated right shoulder in the supine position (Figure 2). The initial chest radiograph and right clavicular series were interpreted as normal (Figure 3).

For the diagnosis and teaching points, see page 745.

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DIAGNOSIS:

Posterior sternoclavicular joint dislocation. Computed tomography (CT) demonstrated posterior dislocation at the right sternoclavicular joint (Figure 4). Posterior sternoclavicular dislocations are rare and less common than anterior sternoclavicular dislocations, but they are important to recognize because compromise of the great vessels, esophagus, and trachea can occur.^{1,2} Involvement of these structures results in a variety of clinical symptoms, including dysphagia, shortness of breath, venous engorgement, and hypotension from arterial laceration.³ The injury is usually a result of high-energy trauma, such as motor vehicle crashes, that cause posterolateral shoulder compressive forces that dislocate the medial aspect of the clavicle posterior to the sternum.⁴ Cases have also been reported in which posterior dislocation results from direct blunt trauma to the medial clavicular head.

Contrast-enhanced CT is the imaging modality of choice because the great vessels need to be evaluated and plain radiography may not adequately assess joint alignment. Closed reduction is the preferred treatment, but patients presenting more than 48 hours after injury, as in our case, often require surgical intervention.⁵ Posterior sternoclavicular dislocation is an uncommon entity that may present with a variety of signs and symptoms. The diagnosis may be suspected on physical examination, but CT is required for definitive diagnosis and can be lifesaving.

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