

Sternoclavicular Joint Pathology: Examination of a 17-Year Case Series and Recommendation of a Surgical Algorithm

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Purpose: The sternoclavicular joint (SCJ) is an articulation consisting of a capsular-ligamentous complex responsible for stability of the upper extremity during scapulothoracic motion. Traumatic and nontraumatic SCJ pathology is being increasingly identified; however, there is no agreed upon treatment paradigm. The aim of this study is to describe a rational approach to surgical treatment of SCJ pathology based on the 17-year operative experience of a single surgeon case series.

Methods: 37 adolescent or adult patients who presented with SCJ pathology from 2005-2022 to the senior author (PAC) were identified via electronic medical record (EMR), who underwent operative management for infection, arthritis, posttraumatic instability, or physeal injury. The operative technique utilized for patients in each group was then reviewed to help develop a treatment algorithm based on specific SCJ pathology and timing of presentation.

Results: 28 patients were treated for posttraumatic SCJ dislocation and categorized into acute versus chronic, followed by direction of dislocation (anterior vs posterior). Ten were treated acutely. 18 patients presented as chronic injuries due to late presentation undergoing treatment an average of 49 months post-injury.

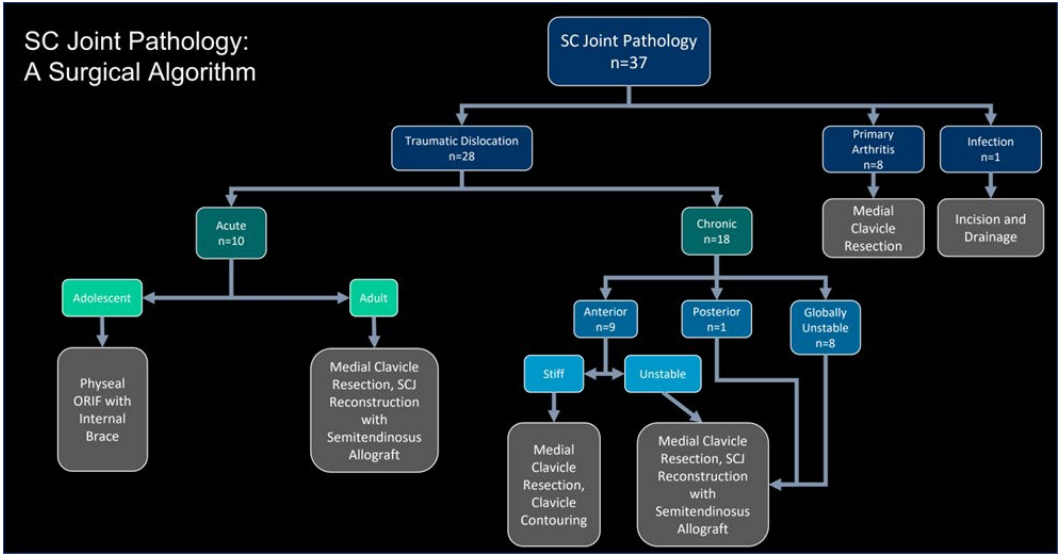
Acute SCJ dislocations in patients with closed physes were treated with SCJ semitendinosus allograft reconstruction and medial clavicle resection. For patients with open physes, open reduction and internal fixation and suture augmentation was utilized.

Chronic dislocations were separated by direction with anterior dislocation being further divided into “stiff” versus “unstable”. Stiff dislocations underwent medial clavicle resection and clavicular contouring. Unstable dislocations were treated with SCJ reconstruction with a semitendinosus allograft.

Eight patients were treated for primary SCJ osteoarthritis and medial clavicle resection provided satisfactory symptom resolution. Finally, 1 patient had septic arthritis of the SCJ and underwent incision and drainage, medial clavicle resection, and resection of necrotic tissue with successful symptom resolution.

All patients were followed for an average of 7 months. Strength testing, range of motion, and overall pain scores were recorded at clinical visits demonstrating improvements for patients who underwent operative treatment.

Conclusion: SCJ pathology is varied and uncommon leading to inefficient operative management. A proposed treatment algorithm has been developed based on a surgical experience. Treatment depends on the direction and chronicity of the dislocation and whether it is an idiopathic or septic form of arthritis.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device they wish to use in clinical practice.