



CWIS Chest Wall Injury Summit 2023

Oral Presentation Abstract Submission

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Title of Presentation Costal margin reconstruction for complex slipping rib syndrome

Background

Slipping rib syndrome (SRS) is a debilitating disorder that is poorly recognized and has few effective treatment options. Costal cartilage excision (CCE) has been used in several published cases. Newer rib-sparing reconstructive options emphasize permanent chest wall stability. Cases of SRS vary from a single slipping rib to complex dissolution of the entire costal margin. A range of strategies may be necessary to address varying complexity levels. We present a novel surgical costal margin reconstruction for complex SRS.

Methods

We retrospectively analyzed our first 100 consecutive patients with complex SRS who underwent costal margin reconstruction. CCE or other SRS surgery had previously been performed in 47% of the patients. Quality of life (QOL) factors, self-assessed breathing function, pain medication use, and freedom from reoperation were analyzed pre- and postoperatively at 1 month and at 6-month intervals up to 2 years using Wilcoxon signed rank sum testing.

Results

Postoperatively QOL improved from a baseline mean of 37% to 88% at 1 year ($p=0.008$). Breathing function improved from 60% to 97% at 6 months ($p<0.001$) in patients reporting a deficit preoperatively. Narcotic and neural modulating drug use for pain dropped to 1% and 10% respectively at 1 year. No reoperations were needed.

Conclusion

Costal margin reconstruction restores protective and functional anatomy. It offers a permanent

solution for SRS of any complexity. It is a useful initial repair or rescue strategy after other failed SRS surgery. Patients with reduced function and often drug-reliance can usually be returned to normal, drug-free, productive lives.