Editorial Commentary: Is Posterior Distal Clavicle Beveling for Chronic Nonincarcerated Type IV Acromioclavicular Separation a Sufficient Treatment?

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Abstract: While low-grade acromioclavicular injuries can be managed nonoperatively, high-grade separations may result in persistent pain or functional decline and require surgical intervention. The authors of "Posterior Distal Clavicle Beveling for Chronic Nonincarcerated Type IV Acromioclavicular Separations: Surgical Technique and Early Clinical Outcomes" present a case series reporting convincing results concerning functional outcomes and early return-to-sport rates for this rather rare condition. While this technique seemed to work well in this small series of patients, in our opinion, this procedure should be reserved for use in exceptional cases only.

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There is consensus that early surgical management should be recommended for patients with Rockwood types IV–VI injuries to the acromioclavicular (AC) joint since this has been shown to prevent long-term sequelae.[1,2] Rockwood type IV injuries (where the clavicle is displaced posteriorly) are rare, and the diagnosis of these types of injuries can sometimes be easily missed acutely, particularly if an axillary radiograph is not obtained. Consequently, some patients are misdiagnosed and present late with chronic Rockwood IV injuries. This is the subset of patients that Buss, Anderson, Tervola, and Giveans[3] studied, and the authors should be commended for focusing on a rare but relevant problem and for sharing the interesting results of their treatment in the paper "Posterior Distal Clavicle Beveling for Chronic Nonincarcerated Type IV Acromioclavicular Separations: Surgical Technique and Early Clinical Outcomes." In their study, the authors report the outcomes of 13 patients who underwent the aforementioned surgery with convincing results.

Overall, the American Shoulder and Elbow Surgeons score improved significantly at short- to mid-term follow-up for all patients. Of 9 patients who participated in sports preoperatively, all 9 patients returned to sport after a mean duration of only 9 weeks postoperatively. Additionally, only one patient underwent revision surgery due to persistent pain and was treated with a coracoclavicular (CC) ligament reconstruction. In general, we agree that resection of the distal clavicle should be considered part of the surgical treatment for all chronic type IV lesions. We certainly applaud the authors for trying to carefully tailor the procedure to the specific pathoanatomy that was encountered. However, we have concerns that this technique in isolation might not be sufficient for highly active patients as the AC and CC ligaments, which by definition are disrupted in the type IV injury, are not addressed.

Aside from the fact that the small number of patients in the series limits the generalizability of the reported technique, the results seem promising and warrant further study, although persistent distal clavicular instability, impingement on the spine of the scapula, and cosmetic problems remain as possible sequelae of isolated distal clavicle beveling. While the less invasive approach that this study supports is certainly seductive, cautious optimism and careful study should be the appropriate response, for as a naysayer might point out, the authors are effectively taking a long and unstable distal clavicle and simply making it a shorter and still unstable distal clavicle. Because the stability of the distal clavicle is not addressed or improved with this technique, concerns obviously remain about persistent distal clavicle hypermobility and scapular spine impingement.

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Perhaps the results could be improved with the addition of a plication or reconstruction of the AC joint capsule or even an arthroscopically assisted CC ligament reconstruction with a free graft,[4] which has documented excellent clinical, structural, and cosmetic results.[5] However, these more invasive surgical techniques also carry inherent limitations and complication profiles. Unfortunately, complications remain high for all types of AC joint stabilization procedures.[6] If this approach proves effective, it would certainly minimize those risks. We applaud the authors for highlighting this approach, which may play a greater role in our treatment paradigm, but the search for a "gold-standard" treatment continues.

References

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