
COMMENTARY & PERSPECTIVE

Primary Latarjet for Anterior Shoulder Instability in Adolescents: An Unstable Conclusion

Commentary on an article by Manuel Waltenspül, MD, et al.: "Long-Term Results and Failure Analysis of the Open Latarjet Procedure and Arthroscopic Bankart Repair in Adolescents"

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Anterior shoulder instability is a common pathology, particularly among active adolescents. In recent decades, our understanding of anterior shoulder instability and its management has evolved, with more emphasis on osseous abnormalities of the glenoid and humeral head, multidirectional instability, and patient factors that increase the risk of recurrence¹. Although the arthroscopic Bankart repair is often considered the first-line treatment for anterior shoulder instability, concerns regarding high failure rates exist, specifically in younger patients and/or those with >15% glenoid bone loss¹. The Latarjet procedure, which functions to improve stability by increasing the glenoid width and by using the sling effect, is often considered an effective treatment option in these cases². As a result of the complexity of many of the factors that contribute to anterior shoulder instability, optimal surgical management remains controversial.

We commend Waltenspül et al. for their long-term retrospective analysis of adolescents who underwent an arthroscopic Bankart repair or an open Latarjet procedure for the treatment of recurrent anterior shoulder instability. In their study, with failure defined as redislocation or persistent anterior apprehension, the authors reported failure rates of 57% for arthroscopic Bankart repair and 6% for open Latarjet procedures. This led the authors to conclude that surgeons should consider the open Latarjet procedure for primary treatment of recurrent anterior shoulder instability in adolescents. These results are in contradiction to most other studies on arthroscopic Bankart repair. Although the high failure rate is concerning, it is important to recognize the methodological limitations of the study, as it was not appropriately designed to compare the 2 treatments. Preoperatively there were significant differences in group characteristics, and there was limited discussion of indications for Bankart repair, raising major concerns for selection bias. Additionally, there are concerns about the technical aspects of the arthroscopic repairs and the experience of the surgeons performing them. Included Bankart repairs utilized a mean of 3 anchors, but as few as only 1 anchor. The number of anchors, in conjunction with the utilization of anchors of an outdated design, may indicate inadequate fixation and the use of improper surgical technique³. Finally, the study included 81 total cases compiled from 12 surgeons over a 10-year period, raising substantial concerns with regard to surgeon volume and its relationship to the reported outcomes.

Although we undoubtedly agree that, in specific circumstances, the Latarjet procedure is a superior option to the arthroscopic Bankart repair, it must be recognized that proceeding with a nonanatomic procedure is a nuanced decision that is not without risk². This choice is complicated further in the adolescent population given their potential need for a future surgical procedure on a nonnative shoulder, the inherently smaller size of the coracoid in a growing patient, and the more severe complication profile of the Latarjet procedure, such as iatrogenic nerve injury, subscapularis atrophy, and screw misplacement². The authors reported 1 iatrogenic axillary nerve injury in the series. This is a catastrophic injury in an adolescent. Additionally, smaller coracoid size may require a smaller-than-preferred screw diameter to minimize fracture risk, ultimately leading to the potential for decreased Latarjet healing causing nonunion, malunion, or surgical failure with continued shoulder instability. When considering the utilization of an arthroscopic Bankart repair or an open Latarjet procedure, it is important to consider patient factors including age, glenoid or humeral bone loss, type of athletic participation, coracoid size, level of competition, and degree and/or direction of laxity⁴. Despite the results of the study, we believe that, in properly indicated adolescent patients, an arthroscopic Bankart repair, in conjunction with a capsular shift, will continue to be a mainstay of anterior shoulder instability treatment. This is particularly true in the case of low-demand patients, non-contact or non-consequence athletes, and patients with minimal bone loss, in whom proper repair techniques have led to excellent outcomes⁴. Key aspects of the Bankart repair are tailoring the amount of capsular shift to the degree of laxity and instability; placing the most inferior anchor at the 5:30 o'clock position; and placing a minimum of 3, but preferably ≥4, anchors^{3,4}. The development of small-diameter, all-suture anchors allows for the placement of more anchors, resulting in additional fixation points for a potentially more robust repair. In the small percentage of patients who do have subsequent instability, the ability to perform a revision Latarjet procedure is maintained, with good outcomes⁵. Ernat et al. recently reported no difference in failure rates or patient outcomes in revision compared with primary Latarjet procedures⁵, in contrast to the results

of this study. In cases in which patients are high-level or collision athletes or have more severe bone loss with an off-track lesion, we commonly will perform a primary Latarjet procedure². These cases require evaluation of the osseous anatomy to determine if continued engagement due to insufficient coracoid width exists, in order to predict the success of the procedure, as described by Mook et al.⁶. Another important aspect to consider is the technical challenges associated with the Latarjet procedure and the potential impacts that surgeon volume has on the ability to perform this effective but complex procedure. In conclusion, both the arthroscopic Bankart repair and the open Latarjet procedure are effective solutions to anterior shoulder instability and, when used in the right patients, can result in low rates of recurrent instability.

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