

Shoulder Clicking, Popping and Instability

Overview

- Coracoid morphology differs significantly in patients undergoing posterior shoulder stabilization compared to patients undergoing surgery for anterior instability or a comparison cohort [1].
- NHL team physicians strongly favor nonoperative management in-season for initial posterior instability events of the shoulder [2].
- Contemporary studies show comparable instability and functional outcomes between arthroscopic and open Bankart repair approaches, whereas historical differences were driven primarily by earlier studies [3].
- Rates of recurrent anterior shoulder instability were high following isolated arthroscopic Bankart repair for on-track Hill-Sachs lesions with <20% glenoid bone loss [4].
- High rates of recurrent anterior shoulder instability following isolated arthroscopic Bankart repair for on-track Hill-Sachs lesions with <20% glenoid bone loss were associated with inferior PROs at mean 10-year follow-up [4].
- There is no difference in outcomes for posterior shoulder instability surgery in patients with a normal vs. pathological radiologist reported magnetic resonance arthrogram study [5].
- A thorough clinical exam is the most important factor when determining indication for shoulder instability surgery [5].
- Open capsular shift with Achilles allograft augmentation demonstrated low rates of recurrent instability and improved clinical outcomes in patients with multidirectional shoulder instability, including those with Ehlers-Danlos syndrome [6].
- Reverse shoulder arthroplasty and glenohumeral arthrodesis are viable options in treating end-stage recurrent shoulder instability [7].
- Arthroscopic repair of posterior humeral avulsion of the glenohumeral ligament in recurrent anterior shoulder dislocations typically results in favorable clinical outcomes [9].
- The likelihood of returning to sports remains uncertain following arthroscopic repair of posterior humeral avulsion of the glenohumeral ligament in recurrent anterior shoulder dislocations [9].
- The modified Kouvalchouk procedure provides good results in the stabilization of recurrent posterior unstable shoulders in traumatic cases and patients without previous surgery [10].

- The modified Kouvalchouk procedure offers the advantage of local harvesting of a bone block and a potential sling effect [10].
- Spin is highly prevalent in abstracts of systematic reviews and meta-analyses investigating free bone block procedures for glenohumeral instability [11].

Anatomy & Pathophysiology

- Labral morphology does not compensate for reduced bony glenoid concavity in clinically stable shoulders [17].
- The labrum contributes significantly to joint depth and creates a more congruent joint by minimizing differences between humerus and glenoid radius of curvature (ROC) [21].
- Healthy young adults exhibit deeper, thicker, and taller glenoid labrum morphology at the 12 o'clock position [21].
- Bilateral posterior shoulder dislocations with reverse Hill-Sachs lesions are uncommon and prone to misdiagnosis [12].
- Traumatic posterior shoulder dislocation can occur in association with a posterior acromion fracture [8].
- Posterior humeral avulsion of the glenohumeral ligament (HAGL) can be present in recurrent anterior shoulder dislocations [9].
- Acute anterior shoulder dislocation carries a risk of subsequent rotator cuff tear (RCT), for which risk prediction models exist [22].

Classification

- Recurrent anterior shoulder instability following isolated arthroscopic Bankart repair for on-track Hill-Sachs lesions with <20% glenoid bone loss was associated with inferior patient-reported outcomes at mean 10-year follow-up [4].
- There is no difference in outcomes for posterior shoulder instability surgery in patients with a normal versus pathological radiologist-reported magnetic resonance arthrogram study [5].
- Open capsular shift with Achilles allograft augmentation demonstrates low rates of recurrent instability and improved clinical outcomes in high-risk patients with multidirectional shoulder instability, including those with Ehlers-Danlos syndrome [6].
- The modified Kouvalchouk procedure provides good results in stabilizing recurrent posterior unstable shoulders in traumatic cases and patients without previous surgery [10].
- Younger surgeons are more likely to incorporate the glenoid track concept into their decision-making for first-time anterior shoulder dislocation compared to older counterparts [13].
- The Instability Severity Index Score and the Hill-Sachs interval-to-glenoid track ratio composite score showed good predictive performance for recurrence after arthroscopic Bankart repair [14].

Clinical Presentation

- Contemporary studies show comparable instability and functional outcomes between arthroscopic and open Bankart repair approaches, whereas historical differences were driven by earlier studies [3].
- A thorough clinical exam is the most important factor when determining the indication for shoulder instability surgery [5].
- Reverse shoulder arthroplasty and glenohumeral arthrodesis are viable options for treating end-stage recurrent shoulder instability [7].
- The likelihood of returning to sports after arthroscopic repair of posterior humeral avulsion of the glenohumeral ligament in recurrent anterior shoulder dislocations remains uncertain [9].
- The modified Kouvalchouk procedure allows for local harvesting of a bone block and offers a potential sling effect [10].
- Early recognition and tailored treatment strategies are essential for satisfactory functional outcomes in bilateral posterior shoulder dislocations with reverse Hill-Sachs lesions [12].
- Younger surgeons are more likely to incorporate the glenoid track concept into their decision-making for managing a first-time anterior shoulder dislocation compared to older counterparts [13].
- Similar return-to-play rates are seen with open versus arthroscopic anterior shoulder stabilization in contact and collision athletes [15].
- Age, labral lesion type, and lesion location are key risk factors for recurrence following arthroscopic labrum repair in patients with anterior shoulder instability at a minimum 10-year follow-up [16].

Investigations

- A thorough clinical exam is the most important factor when determining indication for shoulder instability surgery, with no difference in outcomes for posterior shoulder instability surgery in patients with a normal vs. pathological radiologist-reported magnetic resonance arthrogram study [5].

Treatment

- Kinesio taping combined with conventional rehabilitation leads to more significant improvements in shoulder range of motion and functional scores compared to conventional rehabilitation alone in military personnel with recurrent shoulder dislocation caused by training injury [18].
- Arthroscopic Bankart repair (ABR) for on-track Hill-Sachs lesions with <20% glenoid bone loss is associated with high rates of recurrent anterior shoulder instability and inferior patient-reported outcomes at mean 10-year follow-up [4].
- The Instability Severity Index Score and the Hill-Sachs interval-to-glenoid track ratio composite score show good predictive performance for recurrence after ABR in patients with <20% glenoid bone loss [14].

- Contemporary studies show comparable instability and functional outcomes between arthroscopic and open Bankart repair approaches for anterior shoulder instability, whereas historical differences were driven by earlier studies [3].
- Return-to-play rates are similar between open and arthroscopic anterior shoulder stabilization in contact and collision athletes [15].
- Arthroscopic distal tibial allograft reconstruction with suture button fixation and capsulolabral repair for traumatic anterior shoulder instability yields high rates of graft union and improves clinical outcomes at 2 years [19].
- Arthroscopic bone block using an autologous iliac crest graft with concomitant remplissage results in a favorable outcome for a young patient with extensive sporting activity and severe bipolar bone loss [20].
- The modified Kouvalchouk procedure provides good results in stabilizing recurrent posterior unstable shoulders in traumatic cases and patients without previous surgery, offering the advantages of local bone block harvesting and a potential sling effect [10].
- Arthroscopic repair of posterior humeral avulsion of the glenohumeral ligament in recurrent anterior shoulder dislocations typically results in favorable clinical outcomes, though the likelihood of returning to sports remains uncertain [9].

Complications

- High rates of recurrent anterior shoulder instability following isolated arthroscopic Bankart repair for on-track Hill-Sachs lesions with <20% glenoid bone loss were associated with inferior patient-reported outcomes at mean 10-year follow-up [4].
- Open capsular shift with Achilles allograft augmentation for multidirectional shoulder instability demonstrated low rates of recurrent instability and improved clinical outcomes in patients with Ehlers-Danlos syndrome [6].

Recovery

- Contemporary studies show comparable instability and functional outcomes between arthroscopic and open Bankart repair approaches [3].
- Isolated arthroscopic Bankart repair for on-track Hill-Sachs lesions with <20% glenoid bone loss is associated with high rates of recurrent anterior shoulder instability [4].
- Isolated arthroscopic Bankart repair for on-track Hill-Sachs lesions with <20% glenoid bone loss is associated with inferior patient-reported outcomes at mean 10-year follow-up [4].
- Open capsular shift with Achilles allograft augmentation demonstrates low rates of recurrent instability and improved clinical outcomes in patients with multidirectional shoulder instability and Ehlers-Danlos syndrome [6].

- The likelihood of returning to sports following arthroscopic repair of posterior humeral avulsion of the glenohumeral ligament remains uncertain [9].
- The modified Kouvalchouk procedure provides good results for stabilizing recurrent posterior unstable shoulders in traumatic cases and patients without previous surgery [10].
- The modified Kouvalchouk procedure allows for local harvesting of a bone block [10].
- The modified Kouvalchouk procedure offers a potential sling effect [10].
- The Instability Severity Index Score and the Hill-Sachs interval-to-glenoid track ratio composite score show good predictive performance for recurrence after arthroscopic Bankart repair [14].
- Age is a key risk factor for recurrence following arthroscopic labrum repair in patients with anterior shoulder instability at a minimum 10-year follow-up [16].
- Labral lesion type is a key risk factor for recurrence following arthroscopic labrum repair in patients with anterior shoulder instability at a minimum 10-year follow-up [16].
- Lesion location is a key risk factor for recurrence following arthroscopic labrum repair in patients with anterior shoulder instability at a minimum 10-year follow-up [16].
- Delayed inferior shoulder subluxation can occur secondary to incidental traumatic plexitis following arthroscopic rotator cuff repair [24].
- Functional status in cases of delayed inferior shoulder subluxation secondary to incidental traumatic plexitis reflects the expected timeline of neurological reinnervation following C5-C6 plexitis [24].

Key Evidence

- [L3] Coracoid morphology differs significantly in patients undergoing posterior shoulder stabilization when compared to patients undergoing surgery for anterior instability or a comparison cohort. [1] ([10.1177/03635465261421534](#))
- [L4] NHL team physicians strongly favor nonoperative management in-season for initial posterior instability events of the shoulder. [2] ([10.1177/23259671261440208](#))
- [L4] Publication period subgroup analysis suggests that historical instability differences were driven primarily by earlier studies, whereas contemporary studies show comparable instability and functional outcomes between approaches. [3] ([10.1177/03635465261443999](#))
- [L3] Rates of recurrent anterior shoulder instability were high following isolated ABR for on-track HSLs with <20% glenoid bone loss and were associated with inferior PROs at mean 10-year follow-up. [4] ([10.1177/23259671261430742](#))
- [L3] A thorough clinical exam is the most important factor when determining indication for shoulder instability surgery. [5] ([10.1016/j.xrrt.2026.100675](#))
- [L4] The study demonstrated low rates of recurrent instability and improved clinical outcomes in this high-risk population. [6] ([10.1016/j.jse.2026.05.024](#))
- [L2] TSA and GHA are viable options in treating end-stage recurrent shoulder instability. [7] ([10.1016/j.jseint.2025.101429](#))

- [L4] Two cases document an unusual injury pattern in which a posterior glenohumeral dislocation occurred in association with a (posterior) acromion fracture. [8] ([10.1016/j.xrrt.2025.09.006](https://doi.org/10.1016/j.xrrt.2025.09.006))
- [L4] While arthroscopic repair of this combination typically results in favorable clinical outcomes, the likelihood of returning to sports remains uncertain. [9] ([10.1016/j.jse.2025.04.020](https://doi.org/10.1016/j.jse.2025.04.020))
- [L4] The modified Kouvalchouk procedure provides good results in the stabilization of recurrent posterior unstable shoulders in traumatic cases and patients without previous surgery, with the advantage of local harvesting of a bone block and a potential sling effect. [10] ([10.1016/j.jseint.2026.101681](https://doi.org/10.1016/j.jseint.2026.101681))
- [L4] Spin is highly prevalent in abstracts of systematic reviews and meta-analyses investigating FBB for glenohumeral instability. [11] ([10.1177/03635465251338079](https://doi.org/10.1177/03635465251338079))
- [L4] Bilateral posterior shoulder dislocations with reverse Hill-Sachs lesions are uncommon and prone to misdiagnosis; early recognition and tailored treatment strategies are essential for satisfactory functional outcomes. [12] ([10.1186/s12891-026-09537-y](https://doi.org/10.1186/s12891-026-09537-y))
- [L5] Younger surgeons are more likely to incorporate the glenoid track concept into their decision-making compared to their older counterparts. [13] ([10.1016/j.jse.2025.07.018](https://doi.org/10.1016/j.jse.2025.07.018))
- [L3] The Instability Severity Index Score and the Hill-Sachs interval-to-glenoid track ratio composite score showed good predictive performance for recurrence after ABR. [14] ([10.1002/arj.70009](https://doi.org/10.1002/arj.70009))
- [L2] However, similar return-to-play rates are seen with either approach. [15] ([10.1002/ksa.70263](https://doi.org/10.1002/ksa.70263))
- [L4] Age, labral lesion type, and lesion location are key risk factors for recurrence following arthroscopic labrum repair in patients with anterior shoulder instability at a minimum 10-year follow-up. [16] ([10.1016/j.jse.2025.03.034](https://doi.org/10.1016/j.jse.2025.03.034))
- [L4] This study demonstrates that labral morphology does not compensate for reduced bony glenoid concavity in clinically stable shoulders. [17] ([10.1016/j.jseint.2025.101422](https://doi.org/10.1016/j.jseint.2025.101422))
- [L4] The combined intervention of kinesio taping and conventional rehabilitation led to more significant improvements in shoulder range of motion and functional scores compared to conventional rehabilitation alone. [18] ([10.1186/s12891-026-09753-6](https://doi.org/10.1186/s12891-026-09753-6))
- [L4] Arthroscopic DTA bone block glenoid reconstruction using 2 pairs of suture buttons to treat recurrent traumatic anterior instability with significant bone loss yields improved clinical and acceptable radiological outcomes. [19] ([10.1002/arj.70008](https://doi.org/10.1002/arj.70008))
- [Case_report] This case report demonstrates the efficacy of an arthroscopic Bankart with an arthroscopic bone augmentation of the anterior glenoid wall, in conjunction with an additional remplissage procedure, resulting in a favorable outcome for a young patient with extensive sporting activity. [20] ([10.1016/j.xrrt.2025.100606](https://doi.org/10.1016/j.xrrt.2025.100606))
- [L4] The labrum contributed significantly to the depth and created a more congruent joint by minimizing differences between humerus and glenoid ROC. [21] ([10.1002/arj.70221](https://doi.org/10.1002/arj.70221))
- [L3] The findings may assist orthopedic surgeons in identifying patients at high risk for RCT after shoulder dislocation. [22] ([10.1186/s12891-026-09550-1](https://doi.org/10.1186/s12891-026-09550-1))
- [L4] The case suggests that delayed inferior shoulder subluxation can occur secondary to incidental traumatic plexitis following arthroscopic rotator cuff repair, with functional status reflecting the expected timeline of neurological reinnervation following C5-C6 plexitis. [24] ([10.1016/j.xrrt.2026.100754](https://doi.org/10.1016/j.xrrt.2026.100754))

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