



Analysis of muscular strength and range of motion after surgery for anterior glenohumeral instability

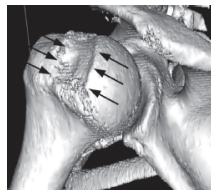
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Conflict of interest: None

Introduction

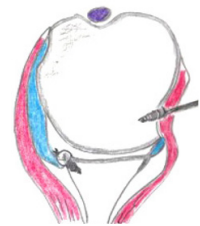
- Incidence of a Hill-Sachs Lesion (HLS):
 - First episode: 40 to 70%
 - Recurrent instability: 100%
- Recurrence risk after isolated arthroscopic Bankart:
 - Without HLS: 4%
 - With a large LHS: 67 %



Buza. Arthroscopic Hill-Sachs Remplissage. JBJS. 2014

Introduction: Remplissage

- First described in 2008, as an arthroscopic means to augment arthroscopic Bankart repair in patients with subcritical glenoid bone loss
- The concept of the glenoid track has emerged as a popular means for defining the need for isolated Bankart versus additional remplissage versus Latarjet.
- However, the glenoid track is often difficult to calculate as it is subject to errors in measurement (e.g., 1-2 mm can change the outcome).



Recurrence rate after Remplissage

- Adjunction of a remplissage procedure for small to medium HSL provided:
 - lower recurrence rate
 - more stiffness
 - similar patient reported outcomes

Alkaduhimi. Arthroscopy. 2019

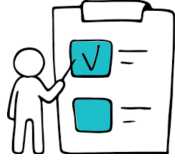
Beyond the recurrence rate

- « Given these factors and based on the low recurrence rate reported, one might ask if remplissage should be used for nearly all patients with subcritical glenoid bone loss »
- Study question: is there a dynamic loss of strength after a Remplissage procedure ?

Denard PJ. Editorial Commentary. Arthroscopy 2019

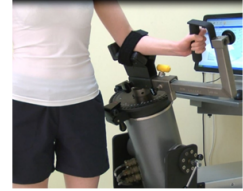
Patients and Methods

- Review board approval
- Retrospective design
- B+R: 32 patients
- Open Latarjet : 27 patients
- Control group: 30 patients
- Mean Follow-up: 27 months



Outcomes

- Main outcome:
Maximal Peak Torque (60°/s, Cybex®)
- Secondary outcomes:
 - Static ROM
 - ASES, Constant et Rowe



Results: B+R vs contralateral shoulder

	B + R	Contra-lateral shoulder	p-value
Internal rotation, Nm	51	54	NS
External rotation, Nm	21	28	<0,01

Results: B+R vs Control Group

	B + R	Control group	p-value
Internal Rotation, Nm	51	50	NS
External Rotation, Nm	21	25	0,04

Results: B+R vs Latarjet

	B+R	Open Latarjet	p-value
Internal rotation, Nm	51	40	<0,01
External rotation, Nm	21	21	NS

Limitations

- Retrospective design
- Clinical significance not know
- Short term follow-up

Discussion

- Merolla et al, 2014: Post B+R: significantly lower ER and IR values compared with the contralateral shoulder.
- Caubère, Boileau et al 2017: Post-Latarjet: significantly lower ER and IR values compared with the contralateral shoulder



Discussion: longer term

- At a minimum of 10 years of follow-up, Remplissage appears to deliver better functional results than Bankart repair only, showing better scores for mobility and stability in the remplissage group.
- Limitations (pain and restriction of motion) reported in literature at short-term follow-up for this technical procedure do not seem to be anymore an issue at long-term follow-up



Bastard. Arthroscopy 2019

Conclusion

- Recent data suggests that for small to medium HSL, Bankart + Hill-Sachs Remplissage is associated with a lower recurrence rate than Bankart alone.
- Hill-Sachs Remplissage is associated with loss of static and dynamic external rotation.
- Latarjet Procedure is associated with a dynamic loss of internal rotation.



Thank you for your attention

