

Long-Term Clinical Outcomes Of Screw Removal Vs. Unrevised Patients Following Latarjet Surgery For Anterior Shoulder Instability A Matched-Pair Analysis



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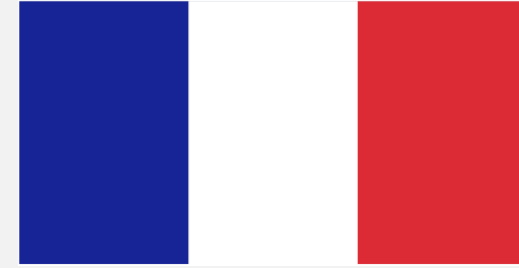
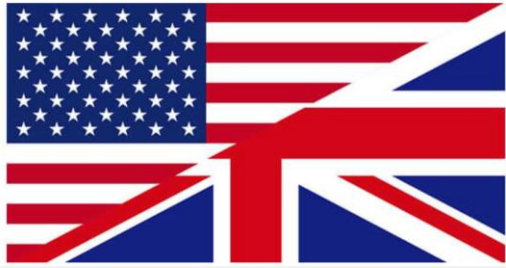
Disclosure



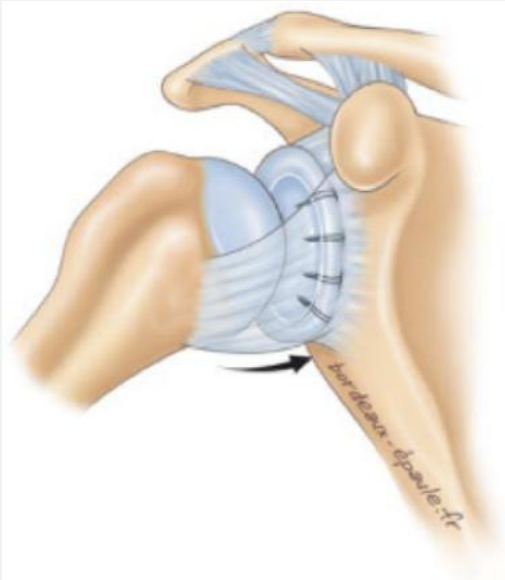
1. **Royalties** from Move Up and SBM
2. **Consulting** income from Arthrex, Move-Up and SBM
3. Past President of **SFA**
4. Member of **Green Shoulder Circle**
5. Co-Founder of the Journal "*The Hive*"



Introduction



COMPLICATIONS



Recurrency
20%

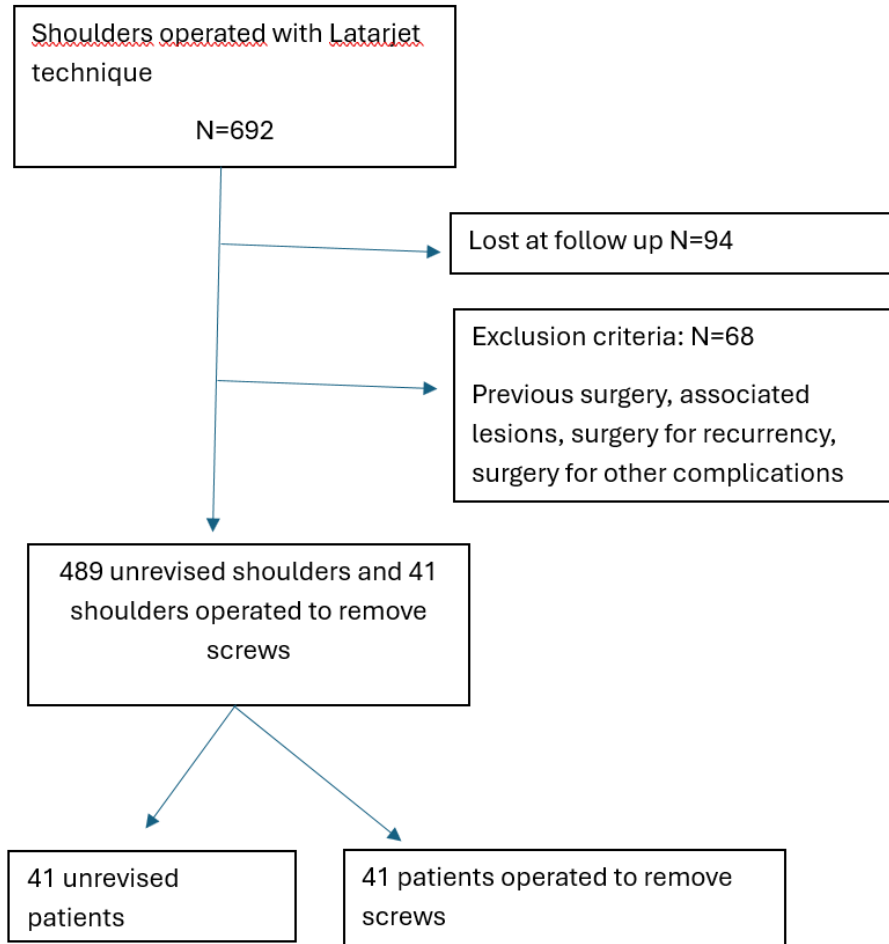
Pseudoarthrosis
Malpositioning
Nerf lesions
Graft Osteolysis
Pain



Hypothesis :

Patients operated for screw removal after Latarjet have the same clinical outcomes compared to unrevised patients

Material and Methodes (Database J. Barth 2007 - 2021)



7 Comparability criteria:

- age ($\leq 40y / > 40y$)
- sex (F/M)
- type of approach (arthroscopic vs open)
- Delay of intervention ($< 2y / 2-5y / > 5y$)
- Dominant side
- Sports level (with or without contact)
- Number of episode of instability ($< 2 / 2-4 / > 4$)

Patients revised to remove screws = 41 = 7.7%

Material and Methodes

- Outcomes evaluated:



Score of Walch & Duplay



SSV, SANE, EVA, satisfaction, return to sport, external rotation and apprehension

Results: Epidemiologic characteristics of the population

	Screw Removal (n = 41)	No Revision (n = 41)	P Value
Gender			.803
Male	29 (71)	31 (76)	
Female	12 (29)	10 (24)	
Age at inclusion, y	27.4 ± 8.5	26 ± 8	.394
Delay until surgery, mo	52.4 ± 50.8	56.4 ± 76.1	.952
Sports classification (AAPC)			.999
Contact	31 (76)	30 (73)	
No contact	10 (24)	11 (27)	
No. of dislocations preop			.957
< 2	18 (44)	18 (44)	
2 – 4	12 (29)	13 (32)	
> 4	11 (27)	10 (24)	
Dominant arm	24 (55)	24 (55)	.999

Results: clinical scores

	Screw removal	Unrevised patients	P
W&D score	76,5	80,8	0,148
PAIN (VAS)	1.1	0,7	0,062
SSV	81,5	85,6	0,137
SANE	89,0	89,1	1,58
External Rotation (°)	65°	70°	0,456
Return to sport at the same level (%)	14 (34%)	25 (61%)	0,04
Satisfaction (%)	35 (85%)	41 (100%)	0,026

Results: Stability

	AMOS	Sans Reprise	P
Stability			0,199
Stable	18 (44%)	19 (48%)	
Apprehension	19 (46%)	18 (45%)	
Subluxation	0 (0%)	3 (8%)	
Recurrency	4 (12%)	0 (0%)	

Discussion

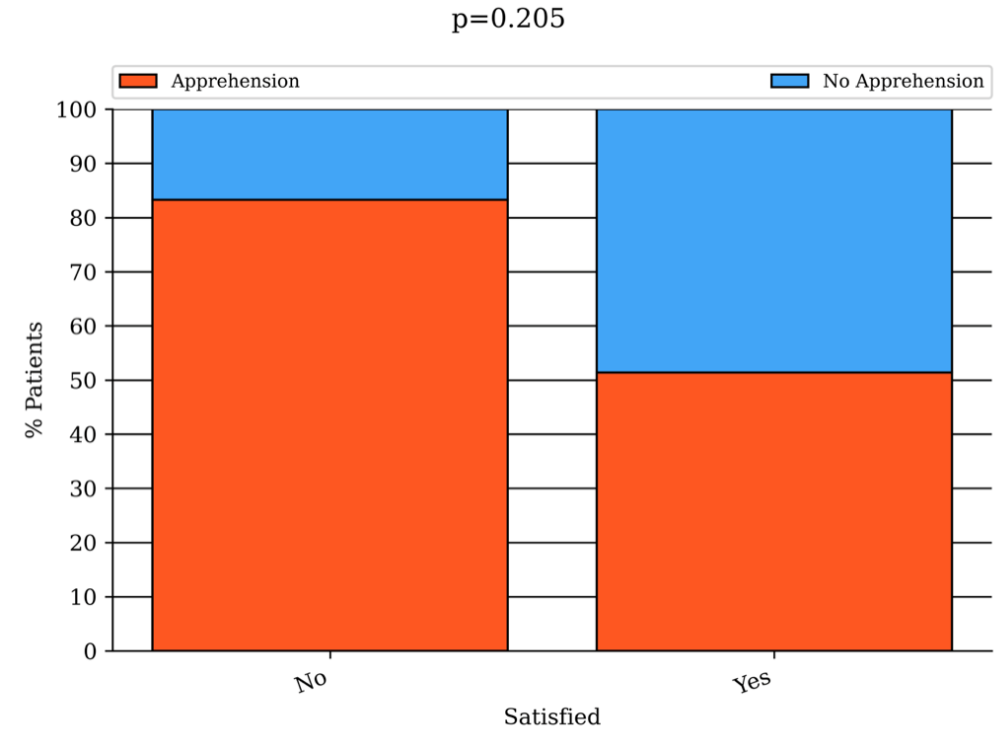
No difference concerning clinical scores between two groups



Discussion

Return to sport at the same preoperated level and satisfaction rate are significantly higher in unrevised patients

These results are not correlated to pain, apprehension and sports level



Conclusion

- No difference between the two groups based on clinical
- Unrevised patients are more satisfied and have better return to sport rate
- Difference in return to sport at the same preoperated level and satisfaction rate are not correlated to pain, apprehension or sports level

In our opinion screw removal after Latarjet has to be considered as a minor complication

Reference

- Balestro JC, Young A, Maccioni C, Walch G. Graft osteolysis and recurrent instability after the Latarjet procedure performed with bioabsorbable screw fixation. *J Shoulder Elbow Surg.* 2015;24(5):711-718.
- Barth J, Boutsiadis A, Neyton L, Lafosse L, Walch G. Can a Drill Guide Improve the Coracoid Graft Placement During the Latarjet Procedure? A Prospective Comparative Study With the Freehand Technique. *Orthop J Sports Med.* 2017;5(10):232596711773421.
- Baverel L, Colle PE, Saffarini M, Anthony Odri G, Barth J. Open Latarjet Procedures Produce Better Outcomes in Competitive Athletes Compared With Recreational Athletes: A Clinical Comparative Study of 106 Athletes Aged Under 30 Years. *Am J Sports Med.* 2018;46(6):1408-1415.
- Bessière C, Trojani C, Carles M, Mehta SS, Boileau P. The Open Latarjet Procedure Is More Reliable in Terms of Shoulder Stability Than Arthroscopic Bankart Repair. *Clin Orthop.* 2014;472(8):2345-2351.
- Bradley Edwards T, Walch G. The latarjet procedure for recurrent anterior shoulder instability: Rationale and technique. *Oper Tech Sports Med.* 2002;10(1):25-32.
- Di Giacomo G, Costantini A, De Gasperis N, et al. Coracoid graft osteolysis after the Latarjet procedure for anteroinferior shoulder instability: a computed tomography scan study of twenty-six patients. *J Shoulder Elbow Surg.* 2011;20(6):989-995.
- Domos P, Lunini E, Walch G. Contraindications and complications of the Latarjet procedure. *Shoulder Elb.* 2018;10(1):15-24.
- Godenèche A, Merlini L, Roulet S, et al. Screw Removal Can Resolve Unexplained Anterior Pain Without Recurrence of Shoulder Instability After Open Latarjet Procedures. *Am J Sports Med.* 2020;48(6):1450-1455.
- Griesser MJ, Harris JD, McCoy BW, et al. Complications and re-operations after Bristow Latarjet shoulder stabilization: a systematic review. *J Shoulder Elbow Surg.* 2013;22(2):286-292.
- Hurley ET, Jamal MS, Ali ZS, Montgomery C, Pauzenberger L, Mullett H. Long-term outcomes of the Latarjet procedure for anterior shoulder instability: a systematic review of studies at 10-year follow-up. *J Shoulder Elbow Surg.* 2019;28(2):e33-e39. 294
- Levy DM, Cole BJ, Bach BR. History of surgical intervention of anterior shoulder instability. *J Shoulder Elbow Surg.* 2016;25(6):e139-e150.
- Shah AA, Butler RB, Romanowski J, Goel D, Karadagli D, Warner JJP. Short-Term Complications of the Latarjet Procedure. *J Bone Jt Surg.* 2012;94(6):495-501.
- Walch G. The Walch-Duplay Score for Instability of the Shoulder. Directions for the use of the quotation of anterior instabilities of the shoulder. Abstracts of the First Open Congress of the European Society of Surgery of the Shoulder and Elbow, Paris, 1987, pp. 51–55.
- Weppe F, Magnussen RA, Lustig S, Demey G, Neyret P, Servien E. A Biomechanical Evaluation of Bicortical Metal Screw Fixation Versus Absorbable Interference Screw Fixation After Coracoid Transfer for Anterior Shoulder Instability. *Arthrosc J Arthrosc Relat Surg.* 2011;27(10):1358-1363