

APPENDIX

Appendix I. Search Strategy	
The Cochrane Library	
Search	shoulder AND (joint instability OR instabil*) AND (rct OR random*)
Limits	Publication date from 1994 to January 16, 2017 English, Dutch
PubMed	
Search	(shoulder[MeSH Terms] OR shoulder*[tiab] OR shoulder joint[MeSH Terms]) AND (random* or RCT) AND (joint instability[MeSH Terms] OR instabil*)
Limits	Publication date from 1994 to January 16, 2017 English, Dutch
EMBASE	
Search	(shoulder surgery OR shoulder) AND (joint instability) AND (randomized OR randomised OR random OR RCT)
Limits	Publication date from 1994 to January 16, 2017
Trip Database	
Search	(shoulder OR shoulder joint) AND (random* or RCT) AND (joint instability OR instabil*)
Limits	Publication date from 1994 to January 16, 2017

Appendix II. Modified CLEAR-NPT

1.	Was the generation of allocation adequate?
2.	Was the treatment allocation concealed?
3.	Were details of the intervention administered to each group presented?
4.	Were details of the rehabilitation/follow-up process presented?
5.	Was the experience or skill of the care providers in each arm presented? 5.1 Were years of experience presented for each healthcare provider? 5.2 Was the annual number of similar interventions performed by the same care provider presented? 5.3 Was the annual number of general interventions performed by the same care provider presented? 5.4 Was any account for care provider's learning curve presented?
6.	Was the experience or skill of the care providers in each arm appropriate?
7.	Was participant adherence assessed quantitatively?
8.	Were participants adequately blinded? 8.1 In case of comparison of two operations with different operation marks (i.e. arthroscopic versus open operation) answer this item with "not-applicable".
9.	Was the level of activity of the patients adequately presented? 9.1 Was the number of contact/collision athletes and non-contact/collision athletes presented? 9.2 Was the number of athletes participating in competitive/recreational sports presented?
10.	Were details of the comorbidity/associated lesions presented?
11.	Were care providers or persons caring for the participants adequately blinded? 11.1 In case that the surgeon performing the operation was not blinded, was the person taking care of the follow up adequately blinded?
12.	Were all other aspects of treatment and care identical for each arm?
13.	Were numbers of patients who were screened but found to be not eligible mentioned? 13.1 Are patients that withdrew or that were lost to follow-up presented? 13.2 Are they comparable for each arm?
14.	Were outcome assessors adequately blinded to assess the primary outcomes?
15.	If outcome assessors were not adequately blinded, were specific methods used to avoid ascertainment bias?
16.	Was the follow-up schedule the same in each group?
17.	Were the main outcomes analyzed according to the intention-to-treat principle?
18.	Was the amount of complications presented?

Appendix III. Study characteristics

	Follow-up (months)	Sample size	Intervention	Control	Results group intervention
Archetti Netto ¹⁸	37.5 (mean)	50	Arthroscopic techniques	Open techniques	DASH
Bottoni ¹⁹	32 (mean)	64	Arthroscopic techniques	Open techniques	Failure, Operative time, SANE, SST, WOSI, UCLA, FF, ER, IR
Castagna ²⁰	24 (mean)	40	Anterior suture anchors capsulorrhaphy	Two posterior plications in addition to the anterior capsulorrhaphy	FF, ER add, ER ab IR, UCLA, ASES, Constant
Elmlund ²¹	80 (median)	40	Polygluconate-B polymer tack	Self-reinforced poly-L-lactic acid polymer tack	Failure, ER ab, STR, Constant, Rowe
Fabbriciani ²²	24 for all patients	60	Arthroscopic techniques	Open techniques	Recurrence, Rowe, Constant
Hiemstra ²³	194 (mean)	48	Arthroscopic techniques	Open techniques	STR in 60° and 180° IR and ER concentric and excentric
Jørgensen ²⁴	36 (median)	41	Arthroscopic techniques with capsular plication	Open techniques using Mitec anchors	Dislocation, Subluxation, laxity, hospitalization duration, ROM, cosmetic complaints, Rowe, modified Constant
Magnusson ²⁵	25 (mean)	40	Polygluconate-B polymer tack	Self-reinforced poly-L-lactic acid polymer tack	Failure, ROM, Rowe, Constant, radiographic visibility of drill holes
Mahiroğulları ²⁶	26.1 (mean)	64	Open Bankart repair	Arthroscopic Bankart repair	Rowe, VAS, ROM
McRae ²⁷	24 (minimum)	88	Arthroscopic Bankart repair with ETAC	Arthroscopic Bankart repair without ETAC	Dislocation, subluxation, WOSI, ASES, Constant
Milano ²⁸	24.5 (median)	78	Arthroscopic stabilization with metal suture-anchors	Arthroscopic stabilization with biodegradable suture-anchors	Dislocation, DASH, Rowe, Constant
Mohtadi ²⁹	24 (mean not stated)	196	Arthroscopic techniques	Open techniques	Recurrence, WOSI, ASES
Monteiro ³⁰	31.47 (mean)	50	Arthroscopic techniques with absorbable sutures	Arthroscopic techniques with nonabsorbable sutures	Rowe, ASOSS

Norlin ³¹	24 (mean not stated)	40	Arthroscopic Bankart repair with Mitek anchors	Arthroscopic Bankart repair with bone sutures	Stability, ROM, Rowe, concentric and eccentric STR
Owens ³²	24 (minimum)	26	Arthroscopic techniques	Open techniques	SANE, WOSI, ASES, SST, Rowe, Tenger
Rhee ³³	12 (mean not stated)	60	Open Bankart repair	Arthroscopic Bankart repair	STR
Robinson ³⁴	24 (minimum)	88	Arthroscopic examination and joint lavage	Arthroscopic examination and joint lavage and an anatomic repair of the Bankart lesion	Instability, DASH, WOSI, SF-36, ROM, satisfaction, health service costs, complications
Salomonsson ³⁵	120 (mean not stated)	66	Bankart repair using Mitek GI/GII anchors combined with capsular imbrication	Putti-Platt procedure	STR, Rowe, ROM, WOSI
Sperber ³⁶	24 (mean not stated)	56	Arthroscopic reconstruction with the use of biodegradable tacks	Open reconstruction with suture anchors	Recurrence, complications, reoperations
Tan ³⁷	31 (mean)	130	Arthroscopic Bankart repair with GII nonabsorbable anchor	Arthroscopic Bankart repair with Panalock absorbable anchor	Recurrent instability, level of sporting ability, Oxford Insability score, VAS, SF-12
Warme ³⁸	25 (mean)	40	Open Bankart repair with absorbable suture anchors	Open Bankart repair with nonabsorbable suture anchors	Failure, Rowe
Zaregade ³⁹	Not stated	40	Arthroscopic Bankart repair	Bristow procedure	Constant, ASES, UCLA, Rowe, satisfaction

Abbreviations:

DASH = Disabilities of the Arm, Shoulder and Hand

ROM = range of motion

SANE = Single Assessment Numeric Evaluation

SST = Simple Shoulder Test

WOSI = Western Ontario Instability Index

UCLA = University of California, Los Angeles evaluation

FF = forward flexion

ER = external rotation; add= adducted, ab=abducted

IR = internal rotation

STR= strength

VAS = visual analog scale

ASES = American Shoulder and Elbow Surgeons Standardized Shoulder Assessment Form

ASOSS = Athletic Shoulder Outcome Scoring System

SF-36= short form 36, SF-12 = short form 12

