

Appendix 1

Table 1. Commonly used surgical techniques for ulnar collateral ligament reconstruction

Technique	Ulna	Humerus	Ulnar fixation	Humeral fixation	Graft configuration	Management of FP mass	Management of ulnar nerve	Routine arthroscopy
Jobe	Tunnel	Tunnel	None	Sutured to itself	Figure-of-8	Transection	Submuscular transposition	No
Modified Jobe	Tunnel	Tunnel	None	Sutured to itself	Figure-of-8	Split	Based on symptoms	No
Docking	Tunnel	Socket	None	Sutured over bone bridge	Triangle	Split	Based on symptoms	Yes
Docking plus	Tunnel	Socket	None	Sutured and graft over bone bridge	Figure-of-8	Split	Based on symptoms	No
DANE-TJ	Socket	Socket	Interference screw	Docking over bone bridge	Linear	Split	Based on symptoms	No
Double Docking	Socket	Socket	Suture over bone bridge	Endobutton	Linear	Split	Based on symptoms	No
Hybrid	Tunnel	Anchor	None	Suture anchor, sutured to itself	Triangle	Split	Based on symptoms	No
ASMI modification	Tunnel	Tunnel	None	Sutured to itself	Figure-of-8	Split	Subcutaneous transposition	Yes
Tension slide	Socket	NA	Suspensory cortical, interference screw	NA	NA	NA	NA	NA
Bisuspensory	Socket	Socket	Suspensory cortical	Suspensory cortical	Linear	NA	NA	NA
Ziploop	Socket	Socket	Suspensory cortical	Interference screw	Linear	NA	NA	NA

ASMI, American Sports Medicine Institute; DANE-TJ, David Altchek Neal ElAttrache Tommy

John; FP, flexor-pronator; NA, not applicable.

Table 2. Summary of outcomes of ulnar collateral ligament reconstruction in recent literature

Author	No. MUCLR	No. MUCL Repair	Dates	Mean Age, y (range)	Number of Males (%)	Sport	Surgical Technique	Graft Choice	Concomitant Procedures	Arthroscopy Performed (%)	Mean Follow-Up	Outcomes	Mean Time to RTS, mo	Complications
O'Brien et al ⁴⁹	3	0	2004-2009	20.3 (16-33)	31/33 (94)	Baseball: 30 Javelin: 3	Modified Jobe; Docking	Palmaris Auto: 24 Hamstring Auto: 5 Achilles Auto: 4	3 flexor-pronator tendon repairs, 2 loose body removals, 1 excision of olecranon spur, 1 ulnar nerve neurolysis without transposition	No	3.7 y	KJOC: 76 Returned to previous level of competition: 82%	Baseball: 10.4 Javelin: 9.5	Subsequent surgery: 3
Jones et al ³³	55	0	2008-2010	17.6 (15-18)	51/55 (92.7)	Baseball: 47 Gymnast: 3 Javelin: 5 All HS	Docking	Palmaris Auto: 45 Gracilis Auto: 10	Transhumeral drilling for capitellar OCD: 2 PM olecranon osteophyte debridement: 2	4/55 (7.3)	31 mo	KJOC: 88 ± 6 Andrews-Timmerman: 83.6 ± 7.2	11.5 Range, 9-14	Ulnar neuritis: 4
Bowers et al ⁶	21	0	2005-2007	20 (16-27)	21/21 (100)	Baseball: 21 5 Pro, 11 College, 5 HS	Modified Docking	Not Specified	None listed	NA	28 mo	Conway: 90% excellent results	NA	None
Dines et al ¹⁸	10	0	2006-2009	18.5 (18-21)	NA	Javelin: 10 5 College, 5 HS	Docking	Palmaris Auto: 9 Gracilis Auto: 1	None listed	NA	28.9 mo	Conway: 90% excellent results Andrews-Timmerman: 97	15	None
Cain et al ⁸	1266	15	1988-2006	21.5 (14-59)	1253/1281 (98)	Baseball: 1213 Javelin: 15 Football: 13 Softball: 9 Tennis: 7	Modified Jobe	Palmaris Auto: 935 Gracilis Auto: 294 Plantaris Auto: 30	Done in 437 patients; primarily excision of PM olecranon osteophytes	NA	38.4 mo	Returned to previous level of competition or higher: 83%	11.6 Range, 3-72	Ulnar neuropraxia: 121 Failure: 9
Dines et al ¹⁶	22	0	NA	20.1 (16-24)	NA	Baseball: 20 1 Pro, 16 College, 3 HS Hockey: 1 Football: 1	DANE TJ	Palmaris Auto: 12 Gracilis Auto: 10	PM olecranon osteophyte debridement: 3 Synovectomy and chondroplasty: 1	3/22 (13.6)	35.9 mo	Conway: 86% excellent results	NA	Ulnar neuritis: 2 Revision for lysis of adhesions: 2
Savoie et al ⁵⁷	116	0	2005-2009	20.4 (14-32)	NA	Baseball, softball, javelin: 23 Pro, 28 College, 45 HS	Docking	Hamstring Allo: 123	None listed	"Most"	39 mo	Conway: 80% excellent results	9.5 Range, 4.5-18	Ulnar neuropathy: 3 Wound problems: 2 Medial humeral epicondyle fracture: 1 FP muscle and tendon tear: 1
Hechtman et al ²⁷	34	0	1997-2002	18.7 (15-23)	34/34 (100)	Baseball: 34 20 College, 14 HS	Hybrid	Palmaris Auto: 29 Plantaris Auto: 3 Achilles Auto: 2	Olecranon osteophyte and loose body removal: 1	NA	6.9 y	Returned to previous level of competition or higher: 85%	10 Range: 7-13	Ulnar neuropathy: 1

Allo, allograft; Auto, autograft; FP, flexor-pronator; HS, high school; KJOC, Kerlan-Jobe Orthopaedic Clinic score; NA, not available; OCD, osteochondritis dissecans; PM, posteromedial; Pro, professional.