Indications and Outcomes for Isolated Patellar Reoperation after Total Knee Arthroplasty

Carlos Gabriel Sandoval¹, Jonathan L Katzman², Vinay Aggarwal, Armin Arshi, Ran Schwarzkopf³ ¹NYU Langone Orthopedic Hospital, ²NYU Langone Health, ³NYU Langone Orthopedic Hospital, Hospital For Joi INTRODUCTION:

Complications arising from the patellofemoral compartment after total knee arthroplasty (TKA) are a challenging and diverse group of pathologies that can lead to revision surgery. Isolated secondary reoperation involving the patellofemoral compartment may address these complications, however, data on the indications and outcomes of isolated patellar reoperations remain limited. This study aimed to determine the indications and outcomes of isolated secondary patellar reoperation after primary TKA.

METHODS: A retrospective review of elective reoperations following TKAs was conducted at an urban academic center from 2011 to 2023. Cases that included isolated patellar reoperations were identified, excluding those that included revision of the femoral or tibial components. Cases of isolated patellar reoperation were analyzed regarding indication for reoperation, number of patellar resurfacings, and measures of short-term and long-term outcomes. RESULTS:

A total of 123 patellar reoperations were included with a mean patient age of 65.2 years (range:42-85) and mean followup time of 2.95 years (range:0.06-8.68). The most common indications for isolated patellar reoperations were aseptic loosening (61.8%), patellar maltracking (10.6%), and patellar osteoarthritis (8.9%). Most reoperations involved patients having their patella resurfaced for a second time (78.9%), while 5.7% had their patella resurfaced for a third time, and 9.7% had a patellar component placed for the first time. Within 90 days post-surgery, seven (5.7%) cases were complicated by an ED visit and seven (5.7%) by hospital readmission. 96 (78.0%) of the cases did not necessitate any return to the operating room following the isolated patellar reoperation. 12 (9.8%) cases underwent patellar re-revision, 8 (6.5%) underwent non-revision surgery, and 7 (5.7%) underwent non-patellar revisions after their isolated patellar reoperation. The indications for the 12 patellar re-revisions were prosthetic joint infections that underwent exchange arthroplasty (6), aseptic loosening of the patellar component (3), patellar maltracking (1), arthrofibrosis (1), and persistent pain (1).

DISCUSSION AND CONCLUSION: Although isolated patellar reoperations are relatively uncommon, they demonstrate favorable survivorship and low reoperation and complication rates, making them a reasonable treatment option for patellofemoral-specific pathology following knee arthroplasty.

Table 1. Patient Demographics for Isolated Patellar Reoperations		Table 2. Indications for Isolated Patellar Reoperation		Table 3. Short-Term Clinical Outcomes		Table 4. Long-Term Clinical Outcomes		
	Knees				Knees		Knees (n = 123)	Mean Time from Primary
a	(n = 123)		Knees		(n = 122)	Non-Revision Reoperations, n (%)	8 (6.5%)	11.4 [0.4-22.9]
Sex, n (76)	\$2 (42 28/)		(n = 123)		(11 - 123)	Irrigation and Debridement	4	,
Female	52 (42.579) 71 (57 7%)	Surgical Indication, n (%)		Mean LOS (days) [range]	2.04 [0-6]	PJI	4	
Mean Ane (wears) [range]	65 2 [42-85]	Asentic Patellar Component Loosening	76 (61.8%)	Mean Operative Time (min) [range]	76.9 [23-169]	Quadriceps Tendon Repair	2	
Race, n (%)	00.11[41-00]	Potellor Maltmaking	13 (10.6%)	Mean Time to Follow-Up (years) [range]	2.95 [0.06 - 8.68]	Tendon Rupture	2	
White	87 (70.7%)	Patellar Ostarathalia	13 (10.076)	Discharge Disposition n (%)		Patellar Tendon Repair	2	
African American	19 (15.4%)	Patellar Osteoarthritis	11 (8.9%)	Discharge Disposition, II (70)	100 (07 00()	Patallar Ro.Revisione n (%)	12 (9.8%)	77106-1451
Hispanic or Latino	13 (10.6%)	Exposed Patellar Bone	8 (6.5%)	Home	108 (87.8%)	PH	6	10 [0.0-14.5]
Other	4 (3.3%)	Patellar Fracture	6 (4.9%)	SNF	12 (9.8%)	Aseptic Patellar Loosening	3	
Smoking Status, n (%)		Oversized Patellar Implant	3 (2 4%)	ARF	3 (2.4%)	Patellar Maltracking	1	
Current	10 (8.1%)	Budles Instant Wass	3 (1.(9())	90-Day FD Visite n (%)	7 (5 7%)	Persistent Knee Pain	1	
Former	46 (37.4%)	Patellar implant wear	2 (1.0%)	New Ortherselfs related	1 (3.176)	Arthrofibrosis	1	
Never	67 (54.5%)	Patellar Clunk	2 (1.6%)	Non-Orthopedic related	3	Non-Patellar Revision Surgeries, n (%)	7 (5.7%)	47.0 [5.8-115.3]
Insurance Status, n (%)		Patellar Arthrofibrosis	1 (0.8%)	Orthopedic related	2	Loosening of Non-Patellar Implant	2	
Medicare	66 (53.7%)	Sentic Patellar Component Loosening	1 (0.8%)	Leg Pain	1	Knee Instability	3	
Medicaid	4 (3.3%)	Septie Fatenar Component Loosening	1 (0.070)	Fall	1	Authors Glassein	1	
Commercial ASA many a (B()	53 (43.0%)			P D D D D D D D D D D D D D D D D D D D	7 (5 79())	Annototosis		
ASA score, n (76)				90-Day Readmissions, n (%)	7 (5.7%)	PII Prosthetic joint infection		
1	5 (2.476)			Irrigation & Debridement for Infection	4	,		
3	50 (40 2%)			Extensor Mechanism Repair	2			
4	1 (0.8%)			New Oncet Atrial Fibrillation	1			
Unknown	8 (6 5%)			New-Offset Aural Florination	1			
Mean BMI (kg/m2) [range]	33.2 [18.8-54.8]							
Mean CCI ± SD	2.85 ± 2.13			LOS, Lengths of hospital stay; SNF, Skilled	nursing facility; ARF,			
Reoperation Procedure Type, n (%)								
Resurfacing native patella not resurfaced in primary TKA	12 (9.7%)			Acute renabilitation facility, ED, Emergency	uepartment			
2nd Patellar Resurfacing	97 (78.9%)							
3rd Patellar Resurfacing	7 (5.7%)							
Unknown History of Patellar Resurfacing	7 (5.7%)							
ASA, American Association of Anesthesiology; BMI, Body mass	index; CCI, Charlson							
comorbidity index; SD, Standard deviation.								