options to provide better femoral fit options compared to its own standard size counterpart, it may only be addressing its own system’s sizing limitations. The next generation knee system has both less overhang and underhang with its standard size, more likely due to surgical technique improvements, rather than component sizing modifications. Furthermore, the need for a narrower component option appears to be less since the newer design was used only one-fifth of the frequency that the gender component was used relative to its standard option.

Category: Knee - Arthroplasty

Time Since Primary Total Knee Arthroplasty Predicts the Success of Debridement, Antibiotics and Implant Retention for Prosthetic Joint Infection: Results from a Prospective, Multicenter Study of 189 Cases

Abstract ID# 22476
All Authors: Richard Rahardja MBChB, BMedSci(Hons) NEW ZEALAND
Mark Zhu MBChB NEW ZEALAND
Joshua Davis MD, PhD AUSTRALIA
Laurens Manning MBChB AUSTRALIA
Sarah Metcalf MBChB NEW ZEALAND
Simon W. Young MD, FRACS NEW ZEALAND

Summary: The time since primary TKA can predict DAIR success in treating prosthetic joint infection.

Data: Introduction: There remains a lack of consensus on the optimal indications for performing debridement, antibiotics and implant retention (DAIR) for prosthetic joint infection (PJI) following total knee arthroplasty (TKA). Numerous PJ classification systems have been proposed, but it is unclear if they can be used to predict DAIR success. This study aimed to identify the success rate of DAIR in a large multicenter cohort and compare the success rates of DAIR between different classification systems of PJI. Methods: Data was analyzed from the Prosthetic Joint Infection in Australia and New Zealand Observational (PIANO) study, a multicenter, prospective study of PJIs occurring between July 2014 and December 2017 in 27 hospitals across Australia and New Zealand. First time PJIs occurring after primary TKA that were managed with DAIR were included for analysis. Baseline patient and surgical data were collected on patient enrolment, and follow-up completed at 1- and 2-years. Treatment success was defined as the patient being alive with documented absence of clinical or microbiological evidence of infection and no ongoing use of antibiotics for the index joint at 2-year follow-up. The rate of DAIR success was compared against different types of PJI as defined by four different classification systems including the Coventry system (early PJI <1 month since primary TKA versus 1-24 months and >24 months), the ICM system (early PJI <90 days since primary TKA, late PJI >90 days), the Auckland system (early PJI =<1 year since primary TKA, late PJI = >1 year) and the Tsukayama system (early PJI =<1 month since primary TKA, hematogenous PJI = >1 month with less than 7 days of symptoms, chronic PJI = >1 month with more than 7 days of symptoms). Univariate analysis was performed via Chi-square test. Multivariate binary logistic regression was performed to compute odds ratios (OR) with 95% confidence intervals (CI). Individual multivariate models were produced for each classification system with adjustment for patient age, gender, body mass index, patient comorbidities, number of infecting organisms and the presence of Staphylococcus aureus or gram-negative bacteria. Results: A total of 189 PJI cases were managed with DAIR, with an overall success rate of 45% (85 out of 189). Early PJIs had a higher rate of DAIR success when analyzed according to the Coventry system (adjusted OR = 3.85, 95% CI 1.41 – 10.50, p = 0.008), the ICM system (adjusted OR = 3.08, 95% CI 1.41 – 6.72, p = 0.005) and the Auckland system (adjusted OR = 2.60, 95% CI 1.26 – 5.35, p = 0.01). A lower rate of DAIR success was observed in both hematogenous (adjusted OR = 0.36, 95% CI 0.14 – 0.93, p = 0.034) and chronic infections (adjusted OR = 0.14, 95% CI 0.04 – 0.51, p = 0.003). Discussion and Conclusion: The success rate of DAIR is highest when performed in infections occurring within one year of the primary TKA. Late infections had a high failure rate following DAIR irrespective of their classification as hematogenous or chronic. Time since primary is a useful predictor of DAIR success.

Category: Knee - Arthroplasty

Lateral Patella Facet Osteoarthritis is Not Contraindicated for Medial UKA: Mean 10-Year Outcomes and Survivorship

Abstract ID# 23460
All Authors: Kevin D. Plancher MD, MPH UNITED STATES
Karen Briggs MPH UNITED STATES
Stephanie C. Petterson MPT, PhD United STATES

Summary: LFPOA is not a contraindication for fixed bearing medial UKA. Patient selection utilizing a specific clinical and radiographic algorithm resulted in excellent outcomes in patients with LFPOA with a patelloplasty at a mean of 10 years. There were no differences in survivorship or outcomes when comparing patients within our control group to those with LFPOA.

Data: Background: Recent consensus statements have suggested that lateral facet patellar osteoarthritis (LFPOA) should be a contraindication for medial UKA due to poor postoperative functional outcomes and continued pain postoperatively. The purpose of this paper was to determine if LFPOA was related to lower survivorship or patient reported outcomes following medial UKA. Methods: One hundred forty-four medial UKAs were performed by a single surgeon and included in the study. All patients were selected with a specific clinical and radiologic patient selection algorithm developed by the senior author. Prior to UKA, all patients underwent knee arthroscopy for research purposes. The patella was examined and the chondral damage of the patellofemoral joint including the medial and lateral patellar facets was recorded in a prospective database. LFPOA was defined as Outerbridge grade 3 or 4 of the lateral patella facet. A patelloplasty was performed in all patients. All patients completed follow-up with clinical exam at a minimum of 5 years following UKA. In addition, patients completed subjective patient-reported outcomes questionnaires to determine Patient Acceptable Symptom State (PASS) for the KOOS subscales. KOOS ADL, KOOS SPORT and KOOS QOL were used based on recent psychometric analysis. Results: One hundred nine patients did not have LFPOA and 35 patients had LFPOA. Seven of the patients with LFPOA had isolated lateral patellar facet OA, and 28 patients had both medial and lateral patellar facet OA. Patients without LFPOA were younger than those with LFPOA (63.9 vs. 69.1±10 years; p=0.006) and there were more females in the LFPOA group (66%) compared to the patients without LFPOA (46%; p=0.032). No patient in the LFPOA group required conversion to TKA at mean 10-year follow-up. Four patients in the control group required conversion to TKA due to technical errors (N=2) early in the surgeon’s series and traumatic falls (N=2) during sports. There was no difference in mean survival time between the 2 groups (p=0.25). Mean survival in the control group was 9.6(95%CI:8.9-10.3) years and in the LFPOA group 10.4(95%CI:9.3-11.4) years. At mean follow-up of 10 years, there was no difference in knee flexion range of motion (without LFPOA=129°, LFPOA=130°; p=0.439) or extension (without LFPOA=0.46°, LFPOA=0.52°; p=0.886). There was also no difference in VR-12 PCS. PASS was achieved in 78% in the control group, and 81% in LFPOA group for KOOS ADL (p=0.807). PASS was achieved in 82% in the control group, and 74% in LFPOA group for KOOS Sport (p=0.441). PASS was achieved in 85% in the control group, and 88% in LFPOA group for KOOS QOL (p=0.723). Conclusion: At a mean of 10 years, there were no differences in survivorship or outcomes when comparing patients without LFPOA versus those with LFPOA. We encourage surgeons to consider counseling patients with isolated medial compartment OA in the presence of lateral facet patella OA to proceed with a medial UKA. We believe surgeons will succeed if an accurate history is obtained that identifies an absence of pain ascending stairs in the lateral compartment that correlates with physical and radiographic examination findings.

Category: Knee - Arthroplasty

Knee Range of Motion after Medial Unicompartmental Knee Arthroplasty is Associated with the Preoperative Radiographic Anteroposterior Alignment of the Entire Lower Extremity and the Sagittal Spinepinal Alignment

Abstract ID# 21267
All Authors: Mitsuru Hanada MD, PhD JAPAN
Yuukihiro Matsuya MD, PhD, Prof. JAPAN

Summary: Patients with a greater posterior tilt of the pelvic alignment had restrictions in knee extension postoperatively, and those with a greater varus alignment of the lower extremity preoperatively had a lower knee flexion after UKA.

Data: Introduction: Although the knee range of motion (ROM) is an important