

# Case Report: Bilateral Total Knee Replacement in Severe Knee Osteoarthritis

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**Abstract:** This case study involved 40 years old Malay gentleman with underlying gout and hypertension presented with chief complaint of bilateral knee pain for 10 years duration. Patient was subjected to bilateral total knee replacement. Patient condition improved after the procedure. This study shows that total knee replacement is a reproducible surgery.

**Keywords:** Gout, hypertension, knee pain

## 1. Introduction

40 years old Malay gentleman with underlying gout and hyper tension presented with chief complaint of bilateral knee pain for 10 years duration. He was walking with limping gait and unable to squat or sit cross legs. Pain had been increasing for the last 5 years. He was dependent on analgesia. Since pain was worsening patient was on wheelchair ambulation. On examination patient right knee, no swelling, fixed flexion at 10 degree, range of movement 10-100 degree flexion, lateral collateral laxity and varus deformity. Left knee had fixed flexion at 5 degree, range of movement 5-100 degree and varus deformity. Blood investigation showed uric acid was high. X-ray of bilateral knee showed reduced joint space, and sclerotic bone.

## 2. Methods

Patient underwent staged bilateral total knee replacement. Left total knee replacement was done followed with right total knee replacement after 5 months. Prophylactic antibiotics were prescribe prior to surgery and continued post operatively for 5 days. Tourniquets were applied in both surgery and surgical approach was midline straight incision with medial parapatellar incision. Intraoperatively left knee noted intraarticular loose bodies and uncontained posteromedial defect which was build up with bone (screw fixation) and bone grafting. Intraoperatively right knee noted posteromedial defect over tibial articular surface, incomplete iatrogenic fracture over medial tibial plateau, augmented with 5mm metal block over medial tibial plateau, bone quality was good, sclerotic bone over medial tibia plateau and multiple holes was drill over the sclerotic bone. Postoperatively the femoral angle (the medial angle between the femoral anatomical axis and a tangent to the distal ends of the femoral condyles) was measured. It should be about  $95^{\circ}$ . The tibial angle (the medial angle between the tibial anatomical axis and a line along the tibialbase plate) should be about  $90^{\circ}$ . Radiological angle was measured by year 3 orthopaedicregistra.

## 3. Results

### 3.1 Right knee preoperative



Post-operative  
Left knee preoperative



Post-operative

Post operatively was uneventful. He was advised for non-weight bearing for 3 months. He was referred to physiotherapy for range of motion exercises. After 1 year post operatively, patient able to ambulate without aid. Pain score improved. Patient does not require analgesia. Functional and knee score is excellent. The range of movement bilateral knee is 0-100 degree.

#### 4. Discussions

TKA was a good decision for this patient to improve his quality of life. Oxford knee score was 43 and SF 36 was 87% respectively. In AP view femoral flexion(alpha) is 95 degree, tibia angle(beta) is 90 degree. In lateral view femoral flexion(delta) is 85 degree and tibia angle(gamma) 3 degree. Overall patient satisfaction is the key for success of TKA. The outcome categories for the OKS have been reported based on the following cut points: excellent (>41), good (34-41), fair (27-33), and poor (<27). SF 36 reported as worst functional outcome of 0 to the best functional outcome

of 100. Patient scored excellent (43) for OKS and 87 for SF36.

#### 5. Conclusion

Outcome shows that total knee replacement is a reproducible surgery for which a trained surgeon will be able to produce excellent and good results.

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