

Total Knee Arthroplasty in Haemophilic Knee Arthropathy: Mid-Term Outcomes, Unique Challenges, and Lessons from a Rare and High-Risk Cohort

Introduction :

Haemophilic knee arthropathy is a rare end-stage condition resulting from recurrent haemarthrosis, leading to severe pain, deformity, contractures, and functional disability. Total knee arthroplasty (TKA) in haemophilic patients is infrequently performed due to high perioperative bleeding risk, inhibitor development, distorted anatomy, and significant logistical and financial challenges. Literature on outcomes, particularly from developing countries, remains sparse.

Methods :

An ambispective observational study was conducted on haemophilic patients undergoing TKA between September 2017 and June 2023 at a tertiary referral centre. Management followed a multidisciplinary protocol involving orthopaedics, haematology, anaesthesia, and rehabilitation. Perioperative factor replacement was administered as per WHO guidelines to maintain 80–100% factor activity, with bypassing agents used in inhibitor-positive patients. Functional outcomes were assessed using WOMAC, KSS and VAS, along with clinical and radiographic evaluation.

Results :

Fifteen patients (22 knees) were included. Pre-operative flexion contracture was present in 13 patients, with several exhibiting complex multi-joint deformities and severely distorted knee anatomy. One patient was factor VIII inhibitor-positive and required FEIBA therapy. Recurrent perioperative haemarthrosis occurred in three patients and was managed conservatively. At mid-term follow-up, KSS showed excellent outcomes in 2 patients, good outcomes in 8 patients, and fair outcomes in 3 patients, with significant pain reduction and functional improvement overall.

Conclusion :

TKA in haemophilic knee arthropathy is a rare, high-risk, and technically demanding procedure, yet provides substantial functional benefit when performed in specialised centres. A structured multidisciplinary approach, meticulous perioperative factor management, and gradual rehabilitation are crucial for successful outcomes. This study contributes meaningful real-world data to the limited global literature on this uncommon but impactful procedure.