

LONG-TERM RESULTS OF UNCEMENTED POSTERIOR STABILIZED TRABECULAR METAL HIGH FLEX TKA IN PATIENTS YOUNGER THAN 65 YEARS

Peter Berglund, David Edmundsson, Joakim Bång, Kjell G Nilsson,
Ortopedkliniken, Norrlands Universitetssjukhus och Umeå Universitet, Umeå

Introduction

Uncemented Trabecular Metal tibial (TMT) component has become more popular during recent years. There are some 7-8 years follow-up with good results, however most studies have been on the CR design on patients with a mean between 60 and 70 years. Posterior stabilized (PS) implants give better flexion, especially if combined with high flex femoral component, which is preferred by younger patients. PS, however, theoretically transfers larger forces to the implant-bone interface, which might not be beneficial in uncemented fixation, especially in younger more active patients. This study reports the results of uncemented PS TMT in patients younger than 65 years with a mean (range) follow-up of 7 (5-13 years).

Patients and methods

Between 2004 and 2011 a total of 105 patients (129 knees, 24 bilateral) were operated with uncemented TMT implants. 48 knees (37 %) had primary osteoarthritis (OA), and in 81 knees (63 %) the OA was secondary to previous meniscus lesions (28), anterior cruciate ligament (ACL) lesion (24), inflammatory arthritis (12), osteochondritis/osteonecrosis (10) or previous fracture of the knee (7). At the follow-up the KOOS and FJS scores were obtained and degree of satisfaction was asked for. X rays for analysis of implant alignment and interface status were done.

Results

Mean Follow-up was 7 years (range 5-11). 96 patients (120 knees) (47% men) came to follow-up. At follow-up 96 patients (120 knees) attended. 9 knees could not be examined; 6 patients did not want to participate, one had moved abroad, one was deceased, and the right knee of a bilaterally operated patient had been revised due to insufficiency fracture below the implant. 70.5 per cent of the patients were very satisfied with the knee and 23.2 per cent were satisfied. Only 1.8 % patients were uncertain and 4.5 % were dissatisfied. Mean KOOS pain score was 83, QoL was 62. In 93% of knees bone was firmly attached to the pegs and undersurface of the implant, in only 6% thin radiolucent lines were seen.

Discussion

Young age, high percentage secondary OA, uncemented fixation, posterior stabilized "high-flex" implant design and male gender are all features normally held as risk factors for poor results such as early aseptic loosening and low patient satisfaction. In this study there were no aseptic loosening and a very high satisfaction rate. This excellent result is probably due to trabecular metal material with high initial friction to bone and elasticity similar to cancellous bone, factors known to be important for uncemented fixation.

Conclusion

Uncemented PS trabecular metal high flex tibial component can safely be used in younger more active patients.