



THE INFLUENCE OF OBESITY ON FUNCTIONAL OUTCOME AND QUALITY OF LIFE AFTER TOTAL KNEE ARTHROPLASTY.

Orthopaedics

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ABSTRACT

BACKGROUND: Obesity, defined by anthropometric measures, is a well-known risk factor for knee osteoarthritis (OA). A high body mass index (BMI) may influence post-TKR rehabilitation outcomes. It has been associated with lower function and more pain before and after total knee arthroplasty (TKA). The aim of this literature review was to specifically evaluate conflicting results of TKA for all obese (body mass index (BMI) >30).

KEYWORDS

Total Knee Arthroplasty (tka), Knee Osteoarthritis (oa), obesity.

AIM AND OBJECTIVE:

This study investigated the influence of body mass index (BMI) on patients' function and quality of life after total knee arthroplasty (TKA).

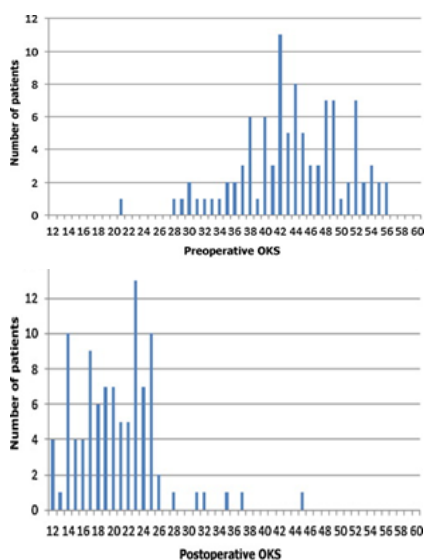
MATERIALS AND METHODS:

A total of 15 patients who underwent unilateral TKA in 2013-18 were included in this retrospective study. They were categorized into two groups based on BMI: < 30 kg/m² (control) and ≥ 30 kg/m² (obese). Functional outcome was assessed using the Knee Society Function Score (KSFS), and Oxford Knee Score (OKS). Quality of life was assessed using the Physical (PCS) and Mental Component Scores (MCS). BMI-for-age percentile was then calculated for each presentation. All patients were investigated with routine follow up with functional assessment at the end of 3 months, 6 months and 1 year. Patients were divided into two groups obese and non obese which were compared.

Complications Most common complications encountered in obese patient would be *deep vein thrombosis, or DVT, Pulmonary embolism, Wound infection* as with all operations. There is a small risk of *dislocation* of the knee. Post operative *pain* would be slightly high in obese patient and depends upon subjective and individual pain threshold. Some people experience continuing or increasing *stiffness* after surgery. Usually this resolves with exercise, and as the swelling improves.

CONCLUSION:

Although both obese and non-obese patients have significant improvements in function and quality of life postoperatively, obese patients tend to have smaller improvements in the OKS and MCS postoperatively. Six months after total knee arthroplasty (TKA), obese patients reported excellent pain relief and substantial functional gain that was similar to the findings in other patients. While obesity is associated with a greater risk of early complications, obesity in itself should not be a deterrent to undergoing TKA to relieve symptoms. It is important to counsel patients on the importance of weight management to achieve a more sustained outcome after TKA.



RESULTS:

Patients in the obese group underwent TKA at (mean, 63.0 years, sd 8.0). Preoperatively, both groups had comparable functional and quality-of-life scores. Postoperatively, the control group had significantly higher OKS and MCS compared with the obese group. After applying multiple linear regression with the various outcomes scores as dependent variables and age, gender, and Charlson Comorbidity Index as independent variables, there was a clear association between obesity and poorer outcome in OKS, and postoperatively ($p < 0.01$ in both KSFS and OKS, and $p = 0.03$ in MCS). Both groups had a high satisfaction rate (97.8% in the control group vs 87.9% in the obese group, $p = 0.11$) and fulfillment of expectations (98.9% in the control group vs 100% in the obese group, $p = 0.32$).