Original Research Article

An Investigation into Risk Factors for Knee Arthroplasty as a Knee Osteoarthritis (OA) Treatment

Parham Maroufi[1], Mohammadreza Moharrami[2]

[1]Assistant Professor of Orthopaedics, Department of Orthopedics, School of Medicine, Shohada Medical Research & Amp; Training Hospital, Tabriz University of Medical Sciences, Tabriz, Iran

[2]Assistant Professor of Orthopaedics, Department of Orthopedics, School of Medicine, Rahat Breath and Sleep Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

ABSTRACT

Abstract:

Introduction: Knee osteoarthritis (OA) is a chronic and multifactorial disease that may require knee arthroplasty if it is not treated early. It is hence necessary to identify the variables predicting knee arthroplasty in patients with knee OA. This study addressed the risk factors for knee arthroplasty as a knee OA treatment.

Methodology: This cross-sectional descriptive study was conducted on 378 patients at Imam Reza Hospital of Tabriz (affiliated with Tabriz University of Medical Sciences, TUOMS) in the period 2019-2020. The participants were selected based on the complete enumeration method. An author-made checklist was completed for all participants to evaluate the risk factors for knee arthroplasty. The participants were assigned to two groups of "knee arthroplasty" and "no knee arthroplasty" to be compared in terms of these variables.

Results: The results showed the effect of different factors on the necessity of knee arthroplasty: BMI (2.42 times), MAA (3.29 times), joint-line-JCA (2.83 times), VA (2.99 times), flexion contracture (3.15 times), total range of flexion (3.66 times), and alignment (varus and valgus) (2.27 times).

Conclusion: There are a variety of risk factors for knee arthroplasty that may affect patients differently. The study findings revealed that high BMI, abnormal MAA and VA, and restricted total range of flexion and alignment were the most important risk factors for knee arthroplasty in patients with knee OA.

Keywords: Osteoarthritis; Knee; Knee arthroplasty; Risk Factor

*Corresponding Author: Tel.: +98 (23) 33654110
E-mail: myousefi50@hotmail.com