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Original Article

Quality of life after total knee arthroplasty: systematic review☆,☆☆

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ABSTRACT

Objective: To review the literature on quality of life among patients who underwent total knee arthroplasty (TKA) and assess the impact of various associated factors.

Methods: This was a systematic review of the literature in the Medline, Embase, Lilacs and SciELO databases, using the terms: TKA (total knee arthroplasty); TKR (total knee replacement); quality of life; and outcomes. There were no restrictions regarding study design.

Results: 31 articles addressing this topic using various quality-of-life evaluation protocols were selected. SF-36/SF-12, WOMAC and Oxford were the ones most frequently used. The studies made it possible to define that TKA is capable of making an overall improvement in patients' quality of life. Pain and function are among the most important predictors of improvement in quality of life, even when function remains inferior to that of healthy patients.

Conclusion: The factors associated negatively were obesity, advanced age, comorbidities, persistence of pain after the procedure and a lengthy wait for surgery.

Qualidade de vida após artroplastia total do joelho: revisão sistemática

RESUMO

Objetivo: Revisar a literatura sobre qualidade de vida em pacientes submetidos a artroplastia total de joelho (ATJ) e avaliar o impacto de diversos fatores associados.

Métodos: Revisão sistemática da literatura nos bancos de dados Medline, Embase, Lilacs e Scielo, com os termos: TKA (*total knee arthroplasty*); TKR (*total knee replacement*); *quality of life*; e *outcomes*. Não houve restrições quanto ao desenho do estudo.

Resultados: Foram selecionados 31 artigos que abordavam o tema com vários protocolos de avaliação de qualidade de vida. SF-36/SF-12, Womac e Oxford foram os mais frequentes. Os estudos permitiram definir que a ATJ é capaz de melhorar globalmente a qualidade de vida

dos pacientes. Dor e função estão entre os mais importantes preditores de melhoria da QV, mesmo quando a função permanece inferior à de pacientes saudáveis.

Conclusão: Os fatores associados negativamente foram obesidade, idade avançada, comordidades, persistência de dor após o procedimento e espera demorada pela cirurgia.

Introduction

Degenerative joint disease, or osteoarthrosis, is generally the main cause of physical deficiencies among elderly people.[1] The pain and functional limitation caused by this condition, especially in the lower limbs, present a strong correlation with reduced quality of life (QOL) among these individuals.[1] In the case of degenerative knee arthropathy, total knee arthroplasty (TKA) is the preferred therapeutic option for cases of greater severity. This surgical procedure has been documented as very satisfactory with regard to pain relief and restoration of joint function. This has led to greatly increased demand for this procedure to be performed, with a consequent strong economic impact.[2]

The current methods for assessing the results from TKA are based mainly on clinical signs and symptoms, physical examination and radiographic evaluation. This type of assessment does not take into account all aspects of the treatment, given that it is unable to detect patients' real needs and expectations, such as changes to their QOL, social relationships and environment.

After achieving pain relief and restoration of joint function during the late postoperative period, patients tend to reassess their priorities. From then on, the way in which the surgical results have had a positive impact on patients' overall health and function and on their QOL needs to be assessed. Recent studies have shown that subjective factors affect the way in which individuals internalize their symptoms and functional capacity. Consequently, objective medical evaluation based on clinical and radiographic examination may be less important than the personal and individual idea that the treatment was successful in providing the results that the patient himself or herself was expecting before the procedure.[3–6]

The impact on QOL and satisfaction in relation to expectations are gaining attention day by day as strong indicators for evaluating the results obtained subsequent to TKA. These two parameters are the only ones capable of presenting the results from patients' own point of view. They also enable better understanding of the real effects from the surgery, including physical and psychosocial benefits, which also should be taken into account in making decisions and in therapeutic management. Studies on QOL have started to be conducted and to be valued because of the fundamental importance that they also have within the scope of public health and public policies, and within the fields of health promotion and disease prevention, as indicators for assessing the efficacy and impact of treatments, especially those that have a high cost.

Many studies have revealed improvements in QOL among patients who have undergone TKA, but the variety of instruments and measurement intervals used, different scoring algorithms and non-standardized presentations of results have also led to challenges in attempting to understand the literature on this topic. It also needs to be emphasized that the presence of various confounding variables such as age, gender, physical health conditions, psychological factors, schooling level, socioeconomic conditions, prior expectations and presence of complications, among others, reveals that there is a need for better comprehension of the real results provided by TKA regarding patients' QOL.[7]

This study had the aim of reviewing the literature on QOL among patients who undergo TKA, with a view to defining the impact of a variety of factors on the results and also defining which of them require better comprehension, in order to guide future studies on this subject.

Materials and methods

In order to survey the literature on this subject, the Medline, Embase, Lilacs and SciELO databases were searched using the following terms: TKA (total knee arthroplasty); TKR (total knee replacement); quality of life; and outcomes. The search was restricted to the English language and the last ten years. The reference lists of the studies selected were also searched for other articles that possibly could be included.

No restrictions were imposed regarding study design. Nonetheless, most of the studies selected were prospective and observational. Studies that, in addition to TKA cases, also included data on patients who underwent total hip arthroplasty (THA) were also accepted if they separated the knee and hip cases in their analyses.

Articles that aimed to validate or compare questionnaires, evaluate revision surgery or nonsurgical treatment, or compare different prosthesis models, were excluded. Likewise, those dealing with other subjects that did not relate directly to the objective of the systematic review were also excluded.

The articles selected through the search were read and evaluated by at least three of the present authors and were accepted through reaching a consensus. After inclusion, all these studies were classified according to their level of evidence, using the system of the Center for Evidence-Based Medicine (CEBM).[8]

The factors evaluated in the studies selected were of methodological nature, such as authorship, design, year, target population, sample, data-gathering instrument used and main clinical outcomes. A critical assessment of the instruments used, the factors that could have acted as confounding variables and the likely relationship between QOL and patients' expectations.

The studies selected were presented descriptively in tables and their data were analyzed in detail to construct a meta-analysis model. However, because of the methodological heterogeneity and the non-standardized form of presentation