
THE IMPACT OF TOTAL HIP ARTHROPLASTY ON QUALITY OF LIFE SIX MONTHS AFTER SURGERY

Mihai COLTAN

M.D., Primary doctor in orthopedics and traumatology

Abstract: BACKGROUND. HIP OSTEOARTHRITIS IS A CAUSE OF SEVERE PAIN AND DISABILITY BUT CAN BE SUCCESSFULLY TREATED WITH TOTAL HIP ARTHROPLASTY. STUDIES REPORT SUBSTANTIAL IMPROVEMENTS IN THE GENERIC HEALTH-RELATED QUALITY OF LIFE AND HIP FUNCTIONALITY IN SUBJECTS WITH HIP OSTEOARTHRITIS. THE INCREASE IN LIFE EXPECTANCY IS BELIEVED TO FURTHER ACCELERATE THE NEED FOR THIS PROCEDURE. THE NUMBER OF THA HAS INCREASED GRADUALLY. METHODS. IN THIS STUDY WE AIMED TO COMPARE THE HEALTH RELATED QUALITY OF LIFE OF THE PATIENTS WITH HIP ARTHROSIS, BEFORE AND 6 MONTHS AFTER A TOTAL HIP ARTHROPLASTY, USING THE 36-ITEM SHORT FORM SURVEY, THE OXFORD HIP SCORE AND OBTAINING THE ANSWER TO AN ADDITIONAL QUESTION REGARDING THE SATISFACTION DEGREE. RESULTS. BY 6 MONTHS AFTER SURGERY, THE THA PATIENTS HAD SUBSTANTIAL AND SIGNIFICANT IMPROVEMENTS IN OXFORD HIP SCORE, ACROSS ALL EIGHT SHORT FORM-36 DIMENSIONS OF HEALTH RELATED QUALITY OF LIFE. 60 OF THE 64 PATIENTS WHICH ANSWERD THE QUESTIONS REGARDING THE OVERALL SATISFACTION AFTER THE SURGERY WERE FEELING BETTER OR MUCH BETTER. CONCLUSION THE PURPOSE OF THIS POST-OPERATIVE ASSESSMENT IS TO EVALUATE THE IMPACT OF THE HIP REPLACEMENT ON THE PATIENT'S QUALITY OF LIFE AND FUNCTIONAL OUTCOMES. THE COMPARISON OF THE SURVEY RESULTS BEFORE AND AFTER THE SURGERY HELPS HEALTHCARE PROFESSIONALS AND RESEARCHERS UNDERSTAND THE EFFECTIVENESS OF THE PROCEDURE IN IMPROVING THE PATIENT'S WELL-BEING AND ADDRESSING ANY SPECIFIC HEALTH ISSUES RELATED TO THE HIP JOINT.

Keywords: THE OXFORD HIP SCORE, THE 36-ITEM SHORT FORM SURVEY, TOTAL HIP ARTHROPLASTY, HEALTH-RELATED QUALITY OF LIFE

**Contact details
of the
author(s):** Email: mihai.coltan@yahoo.com



INTRODUCTION

The increased aging of the population has led to a rise in chronic degenerative diseases including osteoarthritis. Hip osteoarthritis is a condition which generates a lot of pain, affects patient mobility, range of motion and walking range, having a negative impact on quality of life. THA is a successful treatment method to reduce pain and to improve mobility. The number of THA is rising every year. It is currently estimated that 450,000 THA are annually performed worldwide.

There are several studies which demonstrated the positive effect of THA on Health-Related Quality Of Life (HRQOL) ^[1] of patients after the surgery.

The questionnaire most frequently used to evaluate HRQOL is the The 36-item Short-Form(SF-36)^[2] and the most popular method to evaluate the hip function is the Oxford Hip Score (OHS) ^[3].

The 36-Item Short Form Survey (SF-36) is an outcome measure instrument that is often used, well-researched, self-reported measure of health. It stems from a study called the Medical Outcomes Study^[4] for the objective measure of the quality of life.

It comprises 36 questions that cover eight domains of health:

- 1) Limitations in physical activities because of health problems.
- 2) Limitations in social activities because of physical or emotional problems
- 3) Limitations in usual role activities because of physical health problems
- 4) Bodily pain
- 5) General mental health (psychological distress and well-being)
- 6) Limitations in usual role activities because of emotional problems
- 7) Vitality (energy and fatigue)
- 8) General health perceptions

Median values were used when interpreting PROM scores. Score range was 0-100 for both questionnaires with high scores indicating good perceived hip function and quality of life respectively.

The Oxford Hip Score (OHS) is a joint-specific, patient-reported outcome measure designed to assess disability in patients undergoing total hip replacement (THR). It was developed in 1996 to be simple to administer in order to facilitate use^[2], with new scoring introduced in 2007

The OHS is a short 12-item survey that can be done with pen and paper or online.

Patients are asked to reflect on their pain and functional ability over the previous four weeks. There are two domains (pain and function) with six items or questions in each. Each item has four possible responses. Responses range from 0 to 4 where 0 represents the worst outcome and 4 represents the best. In this use, 48 is the maximum (and best) score achievable.

The scores for the 0-48 scale can be interpreted as follows:

Score 0 to 19 indicates severe hip arthritis, with great pain and lack of mobility. Definitely you will require a THA. Such a postoperative score shows a very poor result, without symptom improvement.

Score 20 to 29 indicates moderate to severe hip arthritis. It is high likely that you will require a THA sooner rather than later. Postoperative shows a poor result with just a little pain relief and mobility improvement.

Score 30 to 39 May indicate mild to moderate hip arthritis. The patient may benefit from non-surgical treatment, such as exercise, weight loss, and/ or anti-inflammatory medication. It reflects a good postoperative response with a significant improvement in the quality of life, with just a little bit of pain at some movements.

Score 40 to 48 Indicate satisfactory joint function. It doesn't require any formal treatment. This is a very good postoperative score, with normal hip mobility, normal range of motion and without any pain.

MAIN TEXT

In this study we aimed to compare the health related quality of life of the patients with hip arthrosis, before and 6 months after a total hip arthroplasty.

MATERIAL AND METHODS

This study was a prospective cohort study performed on 72 consecutive cases of hip osteoarthritis which received a THA between January 2021 and December 2022. The operations were performed through a minimally invasive approach. All patients were implanted the type of prosthesis by the same surgeon.

Inclusion criteria were : osteoarthritis on the affected site

Our exclusion criteria were: femoral neck fracture, age under 60, previous hip surgery.

After applying the exclusion criteria, they remained in the study 66 patients. 2 of the patients didn't come for follow-up so the final number was 64 patients in our study.

To evaluate our patients quality of life we used the 36-Item Short Form Survey and the Oxford Hip Score (OHS) before the surgery and six months after the surgery. The questionnaires were designed to be completed by the patient thus minimizing potential bias unwittingly introduced by surgeons when assessing the results themselves.

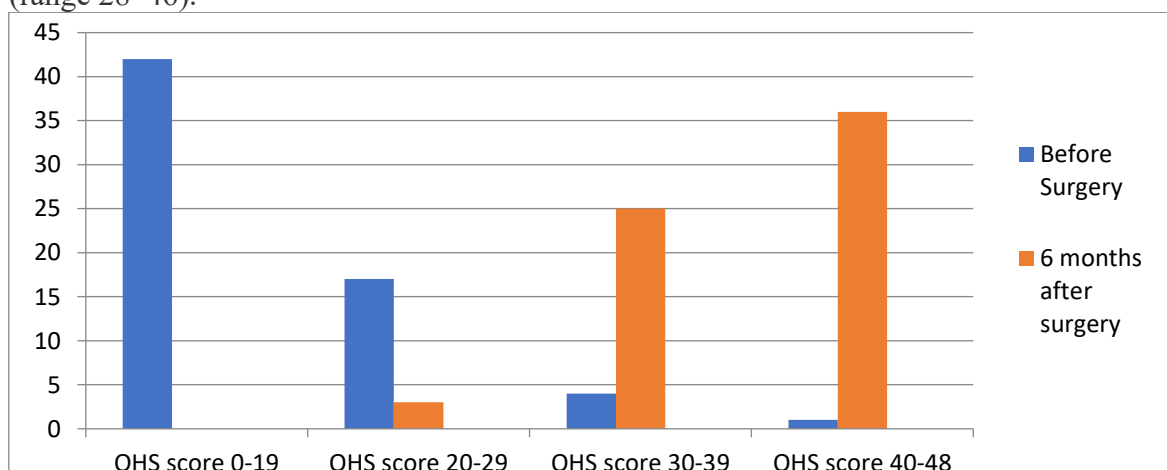
Patients filled questionnaires^[3] the one day before the surgery, when they were attending the hospital, and after that, they had to complete again the same score at the six months evaluation. The patients were alone in the room when completing the forms and no names were involved.

At 6 months after surgery patients also had to answer the next question: “overall, how are your hip problems now compared to before your operation?” with five response categories: “much better”, “a little better”, “about the same”, “a little worse”, and “much worse”.

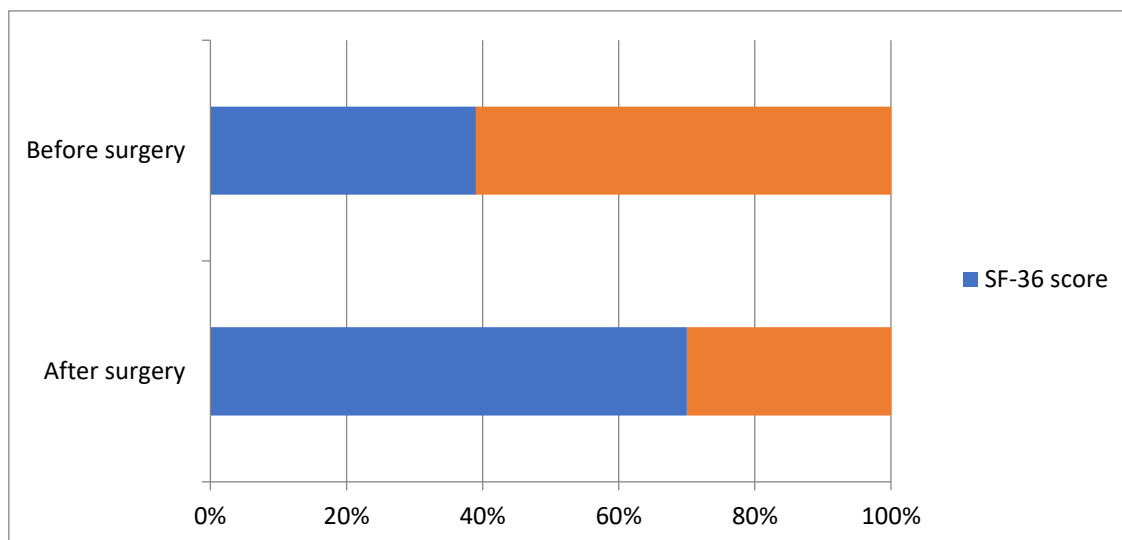
RESULTS

In total, 64 patients completed the 36-Item Short Form Survey, the OHS questionnaire and answered the question regarding the satisfaction after the surgery. The sample consisted of 42 women (65.5%) and 22 men (34.5%) with a mean age of 69.3 years (range 60–85 years).

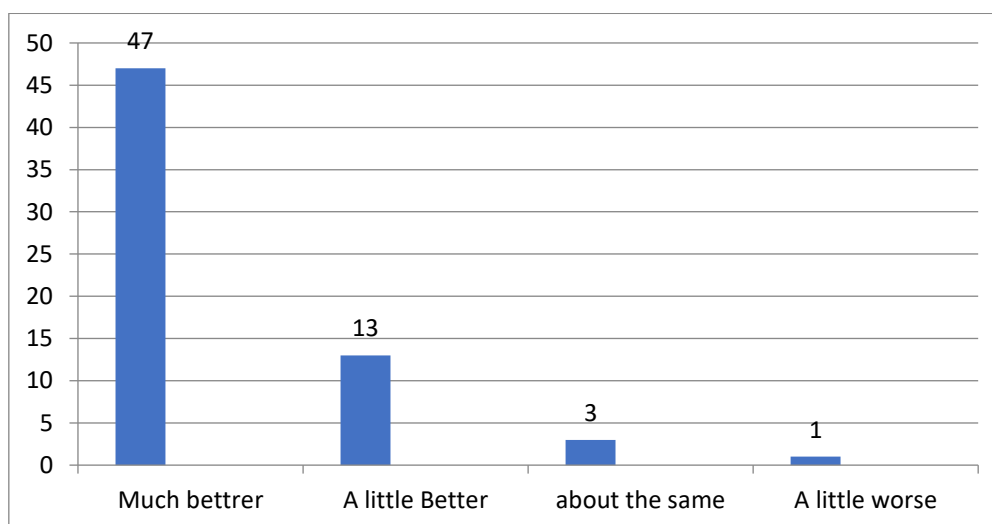
The pre-operative mean OHS was 15.2 (range 8–34) and the mean post-operative OHS was 38.7 (range 28–46).



The mean overall SF-36 score was 39.4 (range 13-56) before the surgery and 77.3 (range 52-91) six months after the surgery.



Regarding the answer at the question “overall, how are your hip problems now compared to before your operation?” 47 patients respond much better, 13 a little better”, 3 about the same”, 1 a little worse”



CONCLUSIONS

The OHS is a useful short tool that is frequently utilised to assess the patient's perception of hip function, mobility and pain. It is quick both for the patient to complete and the clinician to score. Individuals found it difficult to respond to questions about the severity of their symptoms due to the dynamic nature of pain and the use of medications to mask the pain.

By 6 months after surgery, the THA patients had substantial and significant improvements across all eight SF-36 dimensions of HRQL.

The validity of the SF-36 as a measure of outcome after elective surgery is supported by many of our results. The strongest evidence for validity is the direction and magnitude of dimension-specific changes observed in each surgical group relative to what would be expected clinically

The purpose of this post-operative assessment is to evaluate the impact of the hip replacement on the patient's quality of life and functional outcomes. The comparison of the survey results before



and after the surgery helps healthcare professionals and researchers understand the effectiveness of the procedure in improving the patient's well-being and addressing any specific health issues related to the hip joint.



1/2023

REFERENCES

- Measuring the quality of surgical care: structure, process, or outcomes? *J Am Coll Surg*. Birkmeyer JD, Dimick JB, Birkmeyer NJ.
- SF-36 Health Survey Manual & Interpretation Guide. Boston: The Health Institute, New England Medical Center; Ware JE, Snow KK, Kosinski M, Gandek B.
- The Oxford hip score: the patient's perspective. Health and quality of life outcomes. Wylde V, Learmonth ID, Cavendish VJ.
- The Medical Outcomes Study An Application of Methods for Monitoring the Results of Medical Care. Alvin R. Tarlov, MD; John E. Ware Jr, PhD; Sheldon Greenfield, MD; et al
- Katz JN, Phillips CB, Poss R, Harrast JJ, Fossel AH, Liang MH, Sledge CB: The validity and reliability of a Total Hip Arthroplasty Outcome evaluation questionnaire. *J Bone Joint Surg Am* 1995, 77: 1528–1534.