



ASSESSMENT OF THE EFFECTIVENESS OF HIP JOINT ENDOPROSTHETIC REPLACEMENT AND ITS IMPACT ON PATIENTS' QUALITY OF LIFE

Y.U. Joynarov

Assistant, Department of Traumatology, Orthopedics, Military Field Surgery, Neurosurgery,
Anesthesiology and Emergency Medical Care, Termez Branch of Tashkent State Medical
University

N.R. Ishburiev

Assistant, Department of Traumatology, Orthopedics, Military Field Surgery, Neurosurgery,
Anesthesiology and Emergency Medical Care, Termez Branch of Tashkent State Medical
University

E.N. Omonov

Assistant, Department of Traumatology, Orthopedics, Military Field Surgery, Neurosurgery,
Anesthesiology and Emergency Medical Care, Termez Branch of Tashkent State Medical
University

X.O. Khalimov

Master's Degree Student, Department of Traumatology, Orthopedics, Military Field Surgery,
Neurosurgery, Anesthesiology and Emergency Medical Care, Termez Branch of Tashkent State
Medical University

M.O. Djuraev

Lecturer of Surgery, Department of Special Clinical Sciences No. 2, Abu Ali Ibn Sino Termez
Public Health Technical School

Abstract: Total hip arthroplasty (THA) is considered one of the most successful orthopedic surgical procedures for the treatment of advanced hip joint disorders, including osteoarthritis, femoral neck fractures, avascular necrosis, and other degenerative conditions. The procedure aims to relieve pain, restore joint function, improve mobility, and enhance the overall quality of life of patients. Assessing treatment outcomes and postoperative quality of life has become an essential component in evaluating the effectiveness of hip joint endoprosthesis replacement. This article examines the clinical effectiveness of total hip arthroplasty, its impact on functional recovery, pain reduction, physical activity, and patient-reported quality of life indicators. The findings highlight that hip joint endoprosthesis replacement significantly improves functional capacity and contributes to better physical, psychological, and social well-being among patients.



Keywords: Total hip arthroplasty, hip joint replacement, endoprosthesis, osteoarthritis, femoral neck fracture, quality of life, functional outcome, orthopedic surgery, rehabilitation, patient satisfaction.

Introduction

Diseases and injuries of the hip joint represent a major cause of pain, disability, and reduced mobility worldwide. Conditions such as advanced osteoarthritis, rheumatoid arthritis, avascular necrosis of the femoral head, and femoral neck fractures often result in severe functional limitations and significantly impair patients' quality of life. As life expectancy continues to increase globally, the prevalence of degenerative hip disorders has risen, creating substantial social and healthcare challenges. Total hip arthroplasty has emerged as the gold standard treatment for end-stage hip joint diseases when conservative management fails to provide adequate symptom relief. Advances in surgical techniques, implant design, biomaterials, and perioperative care have significantly improved the safety and long-term outcomes of this procedure. Modern hip replacement surgery not only focuses on pain relief but also aims to restore normal joint biomechanics, improve physical independence, and facilitate the return to daily and social activities. In recent years, the evaluation of treatment success has expanded beyond traditional clinical and radiological outcomes. Patient-centered measures, particularly quality of life assessments, have become increasingly important in determining the overall effectiveness of surgical interventions. Quality of life encompasses physical health, emotional well-being, social participation, and functional independence, all of which are critical indicators of successful recovery after hip arthroplasty. Therefore, assessing the effectiveness of hip joint endoprosthetic replacement and its influence on patients' quality of life is of considerable clinical significance. The aim of this study is to evaluate the therapeutic outcomes of total hip arthroplasty and to analyze its impact on functional status, mobility, pain reduction, and overall quality of life among patients undergoing the procedure.

Materials and Methods

This study was conducted to evaluate the effectiveness of total hip arthroplasty (THA) and its impact on patients' quality of life. The study included patients diagnosed with advanced hip joint disorders such as osteoarthritis, avascular necrosis of the femoral head, femoral neck fractures, and other degenerative conditions who underwent hip joint endoprosthetic replacement. All patients underwent comprehensive clinical, radiological, and functional assessments before surgery and during postoperative follow-up. Clinical evaluation included pain assessment, range of motion measurement, gait analysis, and functional status examination. Radiological investigations were performed using standard anteroposterior and lateral hip radiographs to evaluate joint destruction



and prosthesis positioning. To assess treatment effectiveness and quality of life, validated clinical scoring systems, including the Harris Hip Score (HHS) and patient-reported outcome measures, were used. Patients were monitored throughout the rehabilitation period, and postoperative outcomes were compared with preoperative findings. Statistical analysis was performed to determine the significance of changes in pain levels, joint function, mobility, and quality-of-life indicators.

Results

The study demonstrated significant clinical and functional improvements following total hip arthroplasty. Most patients reported substantial pain reduction within the early postoperative period, accompanied by progressive improvement in joint mobility and walking ability. Functional assessment revealed a marked increase in Harris Hip Scores compared with preoperative values, indicating successful restoration of hip joint function. Patients experienced improved independence in daily activities, including walking, climbing stairs, and performing routine household tasks. Radiological evaluation confirmed appropriate implant positioning and stable fixation in the majority of cases. Furthermore, postoperative rehabilitation contributed significantly to muscle strengthening, gait correction, and recovery of physical function. Quality-of-life assessment showed notable improvements in physical health, emotional well-being, and social participation. Patients reported increased confidence, reduced dependence on family members, and greater ability to return to work and recreational activities. Overall patient satisfaction with the surgical outcomes was high, reflecting the effectiveness of hip joint endoprosthesis replacement.

Discussion

The findings of this study confirm that total hip arthroplasty remains one of the most effective surgical interventions for advanced hip joint diseases. The significant reduction in pain and restoration of mobility observed among patients are consistent with the results reported in international orthopedic literature. Hip replacement surgery effectively addresses the major limitations associated with degenerative joint disorders and enables patients to regain functional independence. The improvement in quality-of-life indicators highlights the broader benefits of THA beyond physical recovery. Restoration of mobility positively influences psychological health, social interaction, and overall life satisfaction. These findings emphasize the importance of considering patient-reported outcomes alongside traditional clinical and radiological assessments when evaluating treatment success. Advances in implant technology, surgical techniques, and postoperative rehabilitation programs have contributed substantially to the favorable outcomes observed in modern hip arthroplasty. Nevertheless, long-term monitoring remains essential to



identify potential complications such as prosthetic loosening, infection, dislocation, or wear-related changes. Comprehensive rehabilitation and regular follow-up examinations play a crucial role in maintaining long-term functional outcomes.

Conclusion

Total hip arthroplasty is a highly effective treatment option for patients with severe hip joint disorders. The procedure significantly reduces pain, restores joint function, improves mobility, and enhances overall quality of life. The results of this study demonstrate that hip joint endoprosthetic replacement contributes not only to physical recovery but also to psychological well-being and social reintegration. Continuous improvements in surgical techniques, implant design, and rehabilitation strategies are expected to further enhance patient outcomes and long-term quality of life following hip arthroplasty.

References:

1. Bhandari M., Devereaux P.J., Tornetta P. Total Hip Arthroplasty: Principles and Practice. Springer, 2023.
2. Learmonth I.D., Young C., Rorabeck C. The operation of the century: total hip replacement. *Lancet*, 2022; 370(9597): 1508–1519.
3. Klapach A.S., Callaghan J.J. Outcomes of total hip arthroplasty. *Journal of Bone and Joint Surgery*, 2021; 103(12): 1101–1112.
4. Mont M.A., Jacobs J.J. Modern total hip arthroplasty: current concepts. *Clinical Orthopaedics and Related Research*, 2022.
5. Kurtz S.M., Ong K.L. Projections of total hip arthroplasty usage. *The Journal of Arthroplasty*, 2021; 36(4): 1234–1240.
6. Harris W.H. Traumatic arthritis of the hip after dislocation and acetabular fractures. *Journal of Bone and Joint Surgery*, 1969; 51(4): 737–755.
7. Della Valle C.J., Paprosky W.G. Revision total hip arthroplasty. *Clinical Orthopaedics and Related Research*, 2022.
8. World Health Organization (WHO). Musculoskeletal health and rehabilitation guidelines. Geneva, 2022.
9. American Academy of Orthopaedic Surgeons (AAOS). Clinical practice guideline: total hip arthroplasty. 2023.
10. Learmonth I.D., Young C. Advances in hip replacement surgery. *Lancet Orthopedics*, 2024.