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RESEARCH ARTICLE

EVALUATED SHORT-TERM OUTCOMES OF TOTAL HIP ARTHROPLASTY (PAIN AND FUNCTION) IN PATIENTS WITH OSTEOARTHRITIS OF THE HIP IN TWO ORTHOPEDIC CENTER, IMAM KHOMEINI AND BOOALI SINA HOSPITAL IN SARI, 2011-2015

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ABSTRACT

Background: Since intra-articular prostheses advanced in terms of quality and longevity, monitoring and evaluation of the results of joint arthroplasty is necessary. This study aimed to evaluated the short-term outcomes of total hip arthroplasty (pain and function) in patients with osteoarthritis of the hip in two orthopedic center, Imam Khomeini and BooAli Sina hospital in Sari, 2011-2015

Materials and Methods: This is a retrospective (surgery documents) and prospective (outcomes) study to evaluate hip pain and function after THA surgery by using the Harris Hip.

Results: The average Harris scores was 85.87 ± 12.18. Harris score significantly higher in BooAli orthopedic center, P = 0.04. Harris score was significantly lower in 2011 than the other years P <0. 0001. A significant inverse association was observed between age and Harris score r = -0.168, P = 0.015.

Conclusion: It seems that hip replacement in patients with arthritis and degeneration is not only the effective treatment but also desirable option for increased satisfaction and enhanced quality of life and daily functioning of patients.

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INTRODUCTION

There are more than 100 different types of arthritis. The most common type of arthritis is osteoarthritis (OA) or degenerative joint disease (Huo *et al*., 2007). It is a common chronic, progressive musculoskeletal disorder characterized by gradual loss of articular cartilage (McAuley *et al*., 2004). The disease most commonly affects the middle-aged and elderly, although it may begin earlier as a result of injury or overuse. It is often more painful in weight bearing joints such as the knee, hip, and spine than in the wrist, elbow, and shoulder joints. All joints may be more affected if they are used extensively in work or sports, or if they have been damaged from fractures or other injuries (Kim *et al*., 2003). Osteoarthritis (OA) is the most common form of arthritis and refers to a clinical syndrome of joint pain accompanied by varying degrees of functional limitation and reduced quality of life. Knee, hip and hands are the joints most frequently affected (Yu *et al*., 2012). The causes of osteoarthritis are complex and include physical, environmental and genome factors. This interaction contributes to articular cartilage damage which impacts differently in various joints (Zhan *et al*., 2007). Osteoarthritis is teinausdem angelsächsischen Sprachraum stammender Begriff, derchronisch-degenerative Gelenkveränderungenmit Knorpelabbau bezeichnet, die mit Schmerzen und Funktionseinschränkungen einhergehen (Mariconda *et al*., 2011). Osteoarthritis is a condition of the joint in which the cartilage gets damaged, leading to slow deterioration of the joint. Knees are one of the commonest of joints to be affected by osteoarthritis (Harris, 1969). As the condition goes unnoticed or remains ignored, pain takes hold of your knees and you'll experience reduced knee movements (Parvizi and Morrey, 2000). Visiting a private knee doctor Warrington at the very onset of symptoms helps regain maximum joint normalcy (Wiklund and Romanus, 1991). A healthy body is capable of fixing knee problems that arise out of daily use, on its own. When affected by osteoarthritis, knee joints lose this self-healing capacity (Mancuso and Salvati, 2003). The cartilage – the vital tissue that keeps knee bones from rubbing against each

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other while allowing efficient, uninterrupted joint movements–thins with osteoarthritis (Tidermark *et al*., 2003). With time, loss of cartilage becomes more, which brings the bones into direct contact. This movement of bone against bone causes friction, which leads to formation of abnormal protrusions from the bones, and inflammation, in the joint area (Blomfeldt *et al*., 2005). These developments manifest as pain, swelling, and stiffness of movements, outwardly. Continuous use over years changes the constitution of the cartilage – the protein setup erodes over time. This results in wear and tear of the cartilage, causing osteoarthritis symptoms (Wood and McLauchlan, 2006). You are more at risk if you've a parent, grandparent, or other relative with osteoarthritis. Include a regular consultation with a private knee doctor Warrington, in your health regime, after 40 years of age. This helps detect any osteoarthritis symptoms early. Knees bear most of the body weight. Excess body weight puts more stress on the knees, which can lead to cartilage damage. A job or hobby that constantly puts excess stress on your knees can increase the risk of osteoarthritis. Strenuous physical work, and activities that involve knee use such as climbing and squatting, can affect the knees (Ram *et al*., 2013).

Total hip arthroplasty (THA) including the most clinical successful and affordable interventions in health care, with the excellent long term results in reducing pain and improve function and quality of life in patients with disabling hip disease. Self-reported patient satisfaction has been reported that closer up to 90% (Mariconda *et al*., 2011). Many writers reported on successfully relieved the pain after THA also the in cases where patients' before surgery performance status was very weak (Wiklund and Romanus, 1991). Physical performance improvement is long term more than 25 years (Mancuso and Salvati, 2003) and is not impressed with slight pain. But, despite the significant changes in method of surgery and implant design, some patients continues to experience stress ful the pain after elective surgery. Results of a Danish across the country study showed that 12.1% of patients 12–18 months after hip replacement was in a meaningful way impaired in your everyday activities by chronic pain. The outbreak of pain after a technical satisfactory arthroplasty is of concern for both the orthopaedic surgeon and the patient. This is one of the most hardest challenges for surgeons to evaluate and to treatment. The problems in management is painful THA because to the heterogeneous nature of the disease. Pain in association with the surgery itself could be accompanied by using implant, bone changes and soft tissue or nerve of injuries. The codition complex that history, physical examination, and plain radiography able to put the exact origin of hip pain. In more cases patients was revised without has been found the cause of pain (Zhan *et al*., 2007). In the total 299,368 primary THAs reported in the Swedish Hip Register that were done from 1979 to 2008, the 0,03% were revised for pain as a single cause on behalf of 0,4% of all the reasons to appeal in the 24,199 first review THAs. This study aimed to evaluated the short-term outcomes of total hip arthroplasty (pain and function) in patients with osteoarthritis of the hip in two orthopedic center, Imam Khomeini and BooAli Sina hospital in Sari, 2011-2015.

MATERIALS AND METHODS

Method of study

This study aimed to evaluate short-term outcomes of total hip arthroplasty (pain and function) in patients with osteoarthritis of the hip in two orthopedic center, Imam Khomeini and BooAli Sina hospital in Sari was that has been done by orthopedic surgeons of faculty member, Is a retrospective (learn records patients) and prospective on evaluate the performance of patients and results of arthroplasty is performed. In the first stage, basic information includes the name and patient age and surgeon operation history of the Hospital statistical system was extracted. Finally by examining at Records were recorded the reason of surgery. In the next stage the patient was invited, and completed questionnaires the with the help of they and finally with of physical examination range of motion and limb length discrepancy, if any was measured and recorded. Of each patient once a return Minimal time six months and a maximum of 36 months follow-up period of 21 months after the operation was completed form of Harris.

Admission criterion

All patients were undergoing surgery without considering limits in terms of numbers, if were available and willing and able to participate in this study were covered by the scheme were loaded.

Exclusion criteria

- Patients who were not available for whatever reason.
- Patients who were not satisfied to participate in study.
- Patients who were notable to referral for whatever reason.
- Patients who Patients who unfortunately were dead.

Patients' demographic data, Patients' demographic data, including age, sex of patient records after obtaining informed consent from patients was extracted and were recorded in the form information each person. As well as type of surgery (total or bipolar) also were recorded. Phone call was conducted with patients, and in interviews, consequences of Surgical were evaluated by using Harris scale.

Measuring tools

In evaluation methods of Harris are the following fields:

- Amount of post-operative pain.
- Amount of claudication.
- Amount of stairs up and downgoing.
- Ability to wear socks and shoes.

For each standard of Scoring is intended and ultimately of their total as the assessment score Harris was used in the statistical analysis. In this study evaluated of samples Persian Harris has been used by the Iranian Orthopaedic Association.

Statistical analysis

After collecting demographic information and information about the results of hip arthroplasty using the criteria applied Harris, data were recorded in SPSS 22.0 statistical software. Central tendency and dispersion were used for describing quantitative data and qualitative data. Independent t test for quantitative data analysis in groups and chi-square were used for the analysis of qualitative data in groups. Also, ANOVA and Pearson correlation coefficient was used for analysis the

data. The amount of less than 0.05as the level of statistical significance was considered.

RESULTS

In the study who was conducted to evaluate the consequences of after hip replacement is designed, of year 1391 to 1394, 218 hip replacement surgery was performed in two orthopedic center, Imam Khomeini and BooAli Sina hospital in Sari. Of this number patients, 6 case of due to death and 18 case of were excluded from study due to exclusion criteria. In total 193 hips in 183 patients were studied. In all patients at each surgery were operated only on one side. The mean age of in this study was 9.64 ± 63.40 years.49.2% of patients were male (95 patients) and 50.8% (98 patients) were women.99 surgeries in Imam Khomeini Hospital Center and 94 surgeriesin the Avicenna center was conducted of year 1391 to 1394.

Table 1. Demographic variables and orthopedic surgery in two orthopedic center, Imam Khomeini and BooAli Sina hospital in Sari

Variables of Demographic and surgical		Center Imam Khomeini	Center Avicenna	P value
Gender	Man	54 (50.5%)	45 (48.5%)	0.44
	Female	50 (49.5%)	44 (51.5%)	
Age	Mean ± SD	62.58±9.68	64.35±9.55	0.19
Surgical methods	Total	61 (60.4%)	60 (55.7%)	0.29
	Bipolar	38 (39.6%)	34 (44.3%)	0.28
Side surgery	Right	62 (60.4%)	58 (63.9%)	0.35
	Left	40 (39.6%)	33 (36.1%)	
Primary diagnosis	Osteoarthritis	43 (53.2%)	56 (60.8%)	0.106
	trauma	41 (33.3%)	36 (36.1%)	
	Rheumatoid arthritis	8 (10.8%)	1 (2.1%)	
	Congenital	1 (1.8%)	1 (1.0%)	
	avascular necrosis	4 (0.9%)	0 (0.0%)	

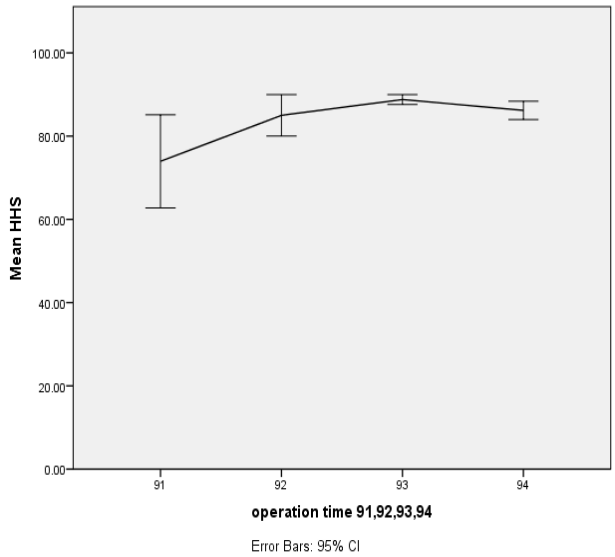

Figure 1. Average score Harris during 1391 to 1394

In 62.2% Surgery (120 cases) the right hip jointand37.8% (73 cases) left hip of the became joint replacement. Surgery in 93.8% of cases (181 cases) primary and in 6.3% of cases (12 cases) have been revition. Surgical method used in 121 cases (62.7%) of total in 72 cases (37.3%) have been bipolar. The first diagnosis, in the hip joint patients leads to surgery involving 99 cases (51.2%) due to osteoarthritis,77 (39.9%), trauma (including fractures smoking or non-modified head, neck and trochanteric Inter),9 (4.7%), rheumatoid arthritis, 5 cases (2.6 percent), congenital and in 3 cases (1.6%),have been avascular necrosis of the femoral head. In patients participated in the study, six patients with exacerbation of gastritis and or STRESS ULCER were controlled with pharmacological therapy. Three cases of With complication with complication three cases of deep vein thrombosis had been of the lower extremities were treated. Two cases also dislocated hip, one of which eventually lead to became to revition.

- Harris score significantly was higher in orthopedic center Avicenna P=0.04.
- Harris score significantly lower in 1391 have been than other years P<0.0001.
- Harris score in both total Surgical methods and with Polar together showed no significant differences and based on the criteria Harris showed similar effects P=0.105.
- In the investigation correlation test coefficient of Pearson, a significant inverse association was observed between age and score Harrisr=-0.168, P=0.015.

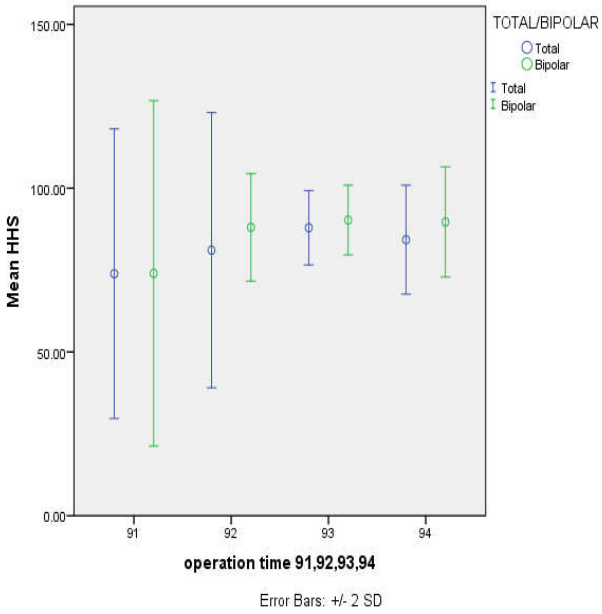

Figure 2. mean Harris score in both Surgical methods in 1391 to 1394

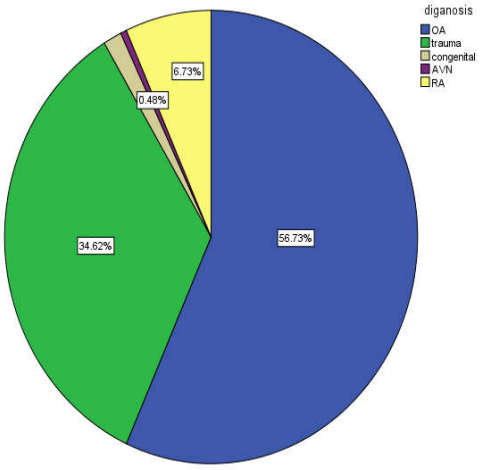

Figure 3. Frequency of early diagnosis leads to surgery

Table 1. Postoperative complications hip replacement

Postoperative complications	Frequency (%)
Aggravate gastritis and STRESS ULCER	6 (3.1%)
Lower Extremity Deep Venous Thrombosis	3 (1.55%)
For superficial or deep infection after surgery	6 (3.1%)
Protrusion	1 (0.51%)

DISCUSSION

In this study, 193 cases of hip replacement surgery outcomes after surgery were evaluated using the Harris score. In this study, the were in two orthopedic center, Imam Khomeini and BooAli Sina hospital in Sari. The high rates of satisfaction found in this study may berelated to several important attributes of the Hospital for Special Surgery. This study assessed major provider attributes that other investigators have found to be related to patient satisfaction.Originally drawn & om the manufacturing and services sectors,these models have been refined for use in healthcare delivery(Edmunds and Boscainos, 2011). The anterolateral approach offers a good view of the acetabulum, which has been shown to increase the accuracy of prosthesis positioning (Pietrzak *et al*., 2009). There is an increased risk of damage to the superior gluteal nerve and the gluteus medius, which attributes to an increased likelihood of post-operative Trendelenburg gait due to abductor weakness (Dudkiewicz *et al*., 2004). Gender distribution of patients was almost identical (49.5% men and 50.5% women). The mean age of patients was 63 years. Surgery used is alsoin58.2%of total and in41.8%also has been bipolar (Motififard *et al*., 2013). The most common primary causes leading to joint replacement surgery due to hip osteoarthritis childhood is in this study (51.2%). And the lowest has been due to the avascular necrosis (1.6%). The difference in the distribution of these characteristics in the two centers there was no investigated. In a study in India Harris score at mean follow-up of 9 years after hip replacement surgery in 92 patients with osteoarthritis and in rheumatoid arthritis patients has been 74.The results of this study in patients with OA similar, but in patients with RA has been less than of the present study (Motififard *et al*., 2013).

Conclusion

According to the findings of this study and other studies in this field, it seems that Hip replacement (both total and bipolar) in patients suffering from a hip injury that cannot be modified Not only effective treatment is but also desirable option them for increased customer satisfaction and enhanced quality of life and daily functioning of patients and reduce medical visits. In the present study has shown that outcomes after hip replacement surgery in the orthopedic centers of Mazandaran University of Medical Sciences, comparable to other studies as well as studies conducted in Europe and America.

REFERENCES

Blomfeldt R, Törnkvist H, Ponzer S, Söderqvist A, Tidermark J. Comparison of internal fixation with total hip replacement for displaced femoral neck fractures. J Bone Joint Surg Am. 2005;87(8):1680-8.

Dudkiewicz I, Covo A, Salai M, Israeli A, Amit Y, Chechik A. Total hip arthroplasty after avascular necrosis of the femoral head: does etiology affect the results? Archives of orthopaedic and trauma surgery. 2004;124(2):82-5.

Edmunds C, Boscainos P. Effect of surgical approach for total hip replacement on hip function using Harris Hip scores and Trendelenburg's test. A retrospective analysis. the surgeon. 2011;9(3):124-9.

Harris WH. Traumatic arthritis of the hip after dislocation and acetabular fractures: treatment by mold arthroplasty. J Bone Joint Surg Am. 1969;51(4):737-55.

Huo MH, Gilbert NF, Parvizi J. What's new in total hip arthroplasty. J Bone Joint Surg Am. 2007;89(8):1874-85.

Kim Y-H, Oh S-H, Kim J-S, Koo K-H. Contemporary total hip arthroplasty with and without cement in patients with osteonecrosis of the femoral head. J Bone Joint Surg Am. 2003;85(4):675-81.

Mancuso CA, Salvati EA. Patients' satisfaction with the process of total hip arthroplasty. Journal for Healthcare Quality. 2003;25(2):12-9.

Mariconda M, Galasso O, Costa GG, Recano P, Cerbasi S. Quality of life and functionality after total hip arthroplasty: a long-term follow-up study. BMC musculoskeletal disorders. 2011;12(1):1.

McAuley JP, Szuszczewicz ES, Young A, Engh Sr CA. Total hip arthroplasty in patients 50 years and younger. Clinical orthopaedics and related research. 2004;418:119-25.

Motififard M, Vakili M, Moezi M. Short-Time Influence of Totah Hip Arthroplasty on Patients with Sever Hip Ostheoarthritis. Journal of Isfahan Medical School. 2013;31(237).

Motififard M, Vakili M, Moezi M. Short-time influence of total hip arthroplasty on patients with sever hip ostheoarthritis mehdi motififard.

Parvizi J, Morrey BF. Bipolar hip arthroplasty as a salvage treatment for instability of the hip. J Bone Joint Surg Am. 2000;82(8):1132-.

Pietrzak K, Strzyewski W, Kaczmarek W, Pucher A, Ciesielczyk B. [Total hip replacement for acetabular protrusion in patients with osteoarthritis]. Chirurgia narzadow ruchu i ortopedia polska. 2009;75(6):357-64.

Ram GG, Thamodaran B, Ashok TR, Perumal S, Varthi VP. Analysis of functional and radiological outcome of total hip replacements in rheumatoid and osteoarthritis patients. Open Journal of Rheumatology and Autoimmune Diseases. 2013;2013.

Tidermark J, Ponzer S, Svensson O, Söderqvist A, Törnkvist H. Internal fixation compared with total hip replacement for displaced femoral neck fractures in the elderly. Bone & Joint Journal. 2003;85(3):380-8.

Wiklund I, Romanus B. A comparison of quality of life before and after arthroplasty in patients who had arthrosis of the hip joint. The Journal of Bone & Joint Surgery. 1991;73(5):765-9.

Wood G, McLauchlan G. Outcome assessment in the elderly after total hip arthroplasty. The Journal of arthroplasty. 2006;21(3):398-404.

Yu L, Wang Y, Chen J. Total hip arthroplasty versus hemiarthroplasty for displaced femoral neck fractures: meta-analysis of randomized trials. Clinical Orthopaedics and Related Research®. 2012;470(8):2235-43.

Zhan C, Kaczmarek R, Loyo-Berrios N, Sangl J, Bright RA. Incidence and short-term outcomes of primary and revision hip replacement in the United States. J Bone Joint Surg Am. 2007;89(3):526-33.

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