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**FUNCTIONAL AND CLINICAL OUTCOMES OF TOTAL HIP ARTHROPLASTY IN  
ARTHRITIS HIP**

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**ABSTRACT**

**Background:** Total hip arthroplasty is a well-documented surgical procedure. It relieves pain and functional disability experienced by patients with moderate to severe arthritis of the hip, improving their quality of life. The success of Total Hip Replacement is its ability to relieve the pain associated with hip joint pathology, while maintaining the mobility and stability of the hip joint. The most common condition for which total hip arthroplasty is done is severe osteoarthritis of the hip, accounting for 70% of cases. The primary indication for this procedure is severe pain and the limitation in activities of daily living that it causes. To warrant doing total hip replacement, pain must be refractory to conservative measures such as oral pain killers and anti-inflammatory measures. **Objective:** The purpose of this study was to evaluate the clinical and functional outcomes of Total Hip Replacement in arthritis hip using Modified Harris hip score. **Methods:** The study was carried out on 15 patients of Total Hip Arthroplasty done for Arthritis hip in the Department of Orthopaedics, Rajah Muthiah Medical College and Hospital, Annamalai University, Chidambaram from July 2013 to May 2015. Patient follow up was for a minimum of 3 months to a maximum of 24 months. **Results:** Excellent pain relief and function were obtained in 73% of patients after THR, which was performed in a population of active patients. The mean total pre-operative score was 38.26, which improved post operatively to a mean score of 92.5. The most common complication noted was anterior thigh pain 3 patients (20%). 11 patients (73%) did not have any complications. 27% of the patients who had complications showed good to excellent results. **Conclusion:** Our study suggests that total hip arthroplasty can provide satisfactory clinical and functional outcomes after an intermediate duration of follow-up and they offer tremendous improvement in the quality of life that otherwise would have been left stranded. Though the study was not free of complications, the overall functional and clinical outcome showed excellent results.

**Keywords:** Total Hip Arthroplasty; Modified Harris Hip Score; Arthritis

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**1. INTRODUCTION**

Total Hip Arthroplasty is a remarkably successful procedure that gives excellent pain relief, functional improvement and improved quality of life for several thousand patients each year worldwide. At present it is the most performed adult reconstruction hip procedure.<sup>1</sup> Total hip replacement (THR) relieves the pain and functional

disability experienced by patients with moderate to severe arthritis of the hip, improving their quality of life.<sup>2</sup> It is a highly cost-effective procedure.<sup>3</sup> In our setup the main target is rural patients, people in rural areas live farther away from hospitals than do people in urban areas. Furthermore, compared with their urban counterparts, rural individuals have less access to specialists. The success of the surgery is mainly due to its ability to relieve the pain while maintaining the stability and mobility of the hip joint. The incidence of chronic disabling conditions of the hip such as osteoarthritis, inflammatory arthritis and osteonecrosis is on the rise.

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The most common condition for which total hip arthroplasty is done is severe osteoarthritis of the hip, accounting for 70% of cases. The primary indication for this procedure is severe pain and the limitation in daily day-to-day activities caused by the hip pathology. Total hip arthroplasty is needed when the pain is not relieved by conservative measures such as oral nonsteroidal anti-inflammatory medication, weight reduction, activity restriction, the use of supports such as a cane and lifestyle modification.

**2.MATERIALSANDMETHODS**

The study was carried out on 15 patients of Total Hip Arthroplasty done for Arthritis hip in the Department of Orthopaedics, Rajah Muthiah Medical College and Hospital, Annamalai University, Chidambaram from July 2013 to May 2015. Patient follow up was for a minimum of 3 months to a maximum of 24 months.

**Inclusion Criteria:**All the patients who had undergone Total Hip Replacement for arthritis of the hip joint at our hospital.**Exclusion Criteria:**1.The patients who had undergone Total Hip Replacement with deformities or pathologies of other joints of the lower limb, which may have had an adverse bearing on the functional outcome of the surgery. 2.Clinical and radiological signs of infection.

**3.RESULTS**

**Table-1: showing age & sex wise distribution**

AGE	MALE	FEMALE	TOTAL
20-30	1	NIL	1
30-40	1	NIL	1
40-50	5	NIL	5
50-60	6	2	8
TOTAL	13	2	15

In our study thirteen patients were male, two were females. Eight patient were in the age group of 50-60 years, five were in the age group of 40-50 years, one each were in the age group of 30-40 years , and 20- 30 years age group.

**Table-2: Showing the diagnosis**

DIAGNOSIS	NUMBER FO CASES	PERCENTAGE
AVN	10	67%
OA	4	26%
RA	1	7%
TOTAL	15	100%

Ten patients were diagnosed as Secondary Arthritis due to AvascularNecrosis, four as primary Osteoarthritis, and one as Rheumatoid Arthritis.

**Table-3: Showing modified Harris Hip Score**

MODIFIED HARRIS HIP SCORE	NUMBER OF CASES	PERCENTAGE
EXCELLENT	11	73%
GOOD	4	27%
TOTAL	15	100%

Excellent modified Harris Hip Score were achieved in 11 patients, good in 4 patients and no one had poor result.



Total hip arthroplasty is a well-documented surgical procedure.<sup>4</sup> It relieves pain and functional disability experienced by patients with moderate to severe arthritis of the hip, improving their quality of life.<sup>5</sup>The study was carried out on15 patients whounderwent Total Hip Replacement for arthritis hip majority of the cases were done under the CMCHIS as most of the patient were from rural

area and were not affordable. In western literature, as per Harkness,<sup>4</sup> Charnley,<sup>6</sup> Eftekhar<sup>5</sup> total hip arthroplasty has primarily been described for patients in older age group of sixty and above. In our study, 53% of the patients were found to be in the 50 and above age group, with age ranging from 27 to 60 years. Majority, 13 were males and 2 were females. The Harris hip score is the most widely used scoring system for evaluating hip arthroplasty.<sup>7</sup> We used Harris hip score to assess the functional outcome in our study. Singling out the primary indication of the procedure is difficult, but reports of Eftekhar<sup>5</sup>, Harkess<sup>4</sup> document the arthritis group to be the most common indication. Arthritis was the most common indication for THR surgery in our study as well, most of which were caused secondary to avascular necrosis. Excellent or good pain relief and function were obtained in almost all of the patients after THR, which was performed in a population of active patients. Bourne et al.<sup>8</sup> in a study of 101 total hip replacements with the PCA (porous-coated anatomic) prosthesis (Howmedica, Rutherford, New Jersey), reported an average Harris hip score of 96 points, but only patients who were free of pain were evaluated. Our study reported an average score of 92 points after minimum of 6 months follow up.

#### Complication

Konyves and Bannister<sup>9</sup> noted that lengthened limbs were also associated with lower clinical hip scores. Limb-length discrepancy can result from a poor preoperative patient evaluation as well as intraoperative technical errors with regard to the level of resection of the femoral neck, the prosthetic neck length, or the failure to restore offset. In our study 1 patient had lengthening of less than 1cm but had good functional outcome.

#### 4.CONCLUSION

In conclusion, the outcome of total hip arthroplasty for arthritis hip is determined by multiple factors, including the design of the component, the selection of the patients, and the operative technique. The results of the procedure must be evaluated in long-term studies. Our study suggests that THR can provide satisfactory clinical and radiographic outcomes after an intermediate duration of follow-up. Thus, these patients do well and THA offers a dramatic change in the lifestyle of the debilitated patients. Studies in the west have always recommended squatting and sitting cross legged to

be avoided, but the needs and culture of the Indian set up are different. Most of the patients do squat against the precautions and there has been no increased risk of dislocation. The pain tolerance and financial restraints of Indian population are different. Most of the patients can barely support one operation. It is almost impossible to convince them for a revision. Thus, we support the use of cemented all polyethylene acetabular components and collarless cemented C-stems in 50 and above age group as a cost effective procedure for the low socio economic strata of the society as they offer tremendous improvement in the quality of life, who otherwise would have been left stranded. Though the study was not free of complications, the overall functional and clinical outcome showed good results.

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