

RESULT OF TOTAL HIP REPLACEMENT (THR) IN ARTHRITIS OF HIP AT DHAKA MEDICAL COLLEGE HOSPITAL (DMCH) IN THE YEAR 2017

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Abstract

Introduction: In arthritic condition like osteoarthritis or rheumatoidarthritis, the hip joint becomes very much painful. Patient can hardly walk or even stand up in advance condition. But total hip replacement can give them new hope to live(1). Medication can relieve the symptom variably but THR can be the ultimate solution for these type of patients.

Materials & Methods: We have operated total sevenpatients in the year, 2017 at DMCH. All have painful hip with advance stages of arthritis. Both cemented and non-cemented THR done for them according to their clinical condition. Early mobilization with the help of walker started for them as soon as the pain permits.

Results: Results were evaluated by Harris Hip Score. All the patients were found clinically improved. Outcome measured with Harris Hip Score was excellent in 4 cases, good in 2 cases and fair in 1 case.

Conclusion: THR is now a days a gold standard of practice throughout the world with published journal. We have started this practice in Bangladesh too and this time at DMCH in a large scale. Results are yet to be decided as at least 1 year follow up is required to find out how they do in our local community.

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Introduction

Total hipreplacement(THR) is widely considered as “operation of the 20th century”¹. THR is an option for nearly all patients with diseases of the hip that cause chronic discomfort and significant functional impairment. Patient with unremitting pain and irreversibly damaged joint is an ideal candidate for THR^{2,3}. Failure of previous reconstruction surgery, AVN of Hip, congenital hip diseases, joint instabilityand pathologicalfracture also are other indications³. Pain in the presence of destructive process in the hip joint is the primary indication for surgery. Infection is absolute contraindication³. Patient with limitation of motion, limp or leg length discrepancy but with little or no pain are not candidate for THR^{1,2}. Severe osteoporosis, Dementia, Alcoholism, Nicotine, peripheral vascular diseases, severe peripheral neuropathy are relative contraindication. Pre-operative planning to restore hip biomechanics and to anticipate andto minimize the risk of complications are the most important steps in successful THR^{1,4}.

Materials and Methods

Total Seven patientswere operated in the year 2017 in DMCH. All had osteoarthritis with

severe painful hip and pain at night. They had also severe limitation of motion and weight bearing .Both cemented andnon cemented THR were done.All were operated in lateral position in Hardings approach under both spinal anesthesia and epidural analgesia. Earlyactive and passive movements of nearby joint were started as pain permit. All the patient’s were also evaluated according to the Harris Hip Score, an empty sample chart is demonstrated in figure 1. On 3rd postoperative day catheter, drain, epidural analgesia were revised, X-ray was done, mobilization with walker with partial weight bearing was started. Oral analgesia was given for 3 to 5 days andInjectable antibiotics were continued for 7days. On 14thpost operative day stitches were removed and patients were discharged. Postoperative follow up was planned on one month, three months, six months and twelve months interval followed by yearlyfollow up for life long. Clinical evaluation, X-ray, basic biochemical and hematological investigations were done in every follow up visit.

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HARRIS HIP SCORE		Page 1 of 1
		PATIENT ID: <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/>
GENERAL INFORMATION		
PATIENT INITIALS: <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <small>(If there is no middle initial please use "X")</small>		VISIT DATE: <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> / <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> / <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/>
OPERATIVE SIDE: <input type="radio"/> Right <input type="radio"/> Left (Check One) <small>(use one form per side)</small>		VISIT: <input type="radio"/> Pre-Op <input type="radio"/> 6 Weeks <input type="radio"/> 1 Year <input type="radio"/> 2 Year <input type="radio"/> 5 Year
I. PAIN		
A. PAIN (Check One) <input type="radio"/> None, or ignores it <input type="radio"/> Moderate pain, tolerable but makes concessions to pain. Some limitations of ordinary activity or work. May require occasional pain medication stronger than aspirin <input type="radio"/> Slight, occasional, no compromise in activities <input type="radio"/> Marked pain, serious limitation of activities <input type="radio"/> Mild, no effect on average activities, rarely moderate pain with unusual activity, may take aspirin <input type="radio"/> Totally disabled, crippled, pain in bed, bedridden		
II. FUNCTION / GAIT		
B. LIMP (Check One) <input type="radio"/> None <input type="radio"/> Slight <input type="radio"/> Moderate <input type="radio"/> Severe or unable to walk	C. SUPPORT (Check One) <input type="radio"/> None <input type="radio"/> Cane, long walks <input type="radio"/> Cane, most of the time <input type="radio"/> One crutch <input type="radio"/> Two canes <input type="radio"/> Two crutches or walker <input type="radio"/> Unable to walk	D. DISTANCE WALKED (Check One) <input type="radio"/> Unlimited <input type="radio"/> Six blocks <input type="radio"/> Two or three blocks <input type="radio"/> Indoors only <input type="radio"/> Bed and chair only
III. FUNCTIONAL ACTIVITIES		
E. STAIRS (Check One) <input type="radio"/> Normally without using a rail <input type="radio"/> Normally using a railing <input type="radio"/> In any manner <input type="radio"/> Unable to use stairs	F. SOCKS / SHOES (Check One) <input type="radio"/> With ease <input type="radio"/> With difficulty <input type="radio"/> Unable	G. SITTING (Check One) <input type="radio"/> Any chair, 1 hour <input type="radio"/> High chair, 1/2 hour <input type="radio"/> Unable to sit comfortably in any chair
H. PUBLIC TRANSPORTATION (Check One) <input type="radio"/> Able to use <input type="radio"/> Not able to use	I. DEFORMITY (Operative side only) Yes No Fixed adduction <input type="radio"/> <input type="radio"/> If yes <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees Fixed internal rotation in extension <input type="radio"/> <input type="radio"/> If yes <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees Leg length discrepancy <input type="radio"/> <input type="radio"/> If yes <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> mm Pelvic flexion contracture <input type="radio"/> <input type="radio"/> If yes <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	
IV. RANGE OF MOTION		
Perform these measurements on the operative hip. Record 10 degrees of fixed adduction as -10 degrees of abduction and 10 degrees of adduction. Similarly, record 10 degrees of fixed rotation as -10 degrees of internal rotation and 10 degrees of external rotation. Also similarly, record 10 degrees of fixed external rotation with 10 degrees additional external rotation as -10 degrees of internal rotation and 20 degrees of external rotation.		
1. PERMANENT (FIXED) FLEXION <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	4. ADDUCTION TO <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	
2. FLEXION TO <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	5. EXTERNAL ROTATION IN EXTENSION TO <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	
3. ABDUCTION TO <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	6. INTERNAL ROTATION IN EXTENSION TO <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> degrees	
V. COMMENTS		
INVESTIGATOR NAME (PRINT): <input style="width: 100%; height: 20px;" type="text"/>		DATE: <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> / <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> / <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/>
INVESTIGATOR SIGNATURE: <input style="width: 100%; height: 20px;" type="text"/>		

Fig.-1 : Harris Hip Score chart

Result:

Average Patient's age was 57 years and 56% were female and 44% were male. All the patients were from very low socioeconomic background and we supported them by providing Prosthesis complementary. Results were evaluated by

Harris hip score which was adopted from the Campbell's Operative Orthopaedics. All the patients were found clinically improved which was evident by 56% with excellent outcome, 28% with good outcome and 16% with fair outcome

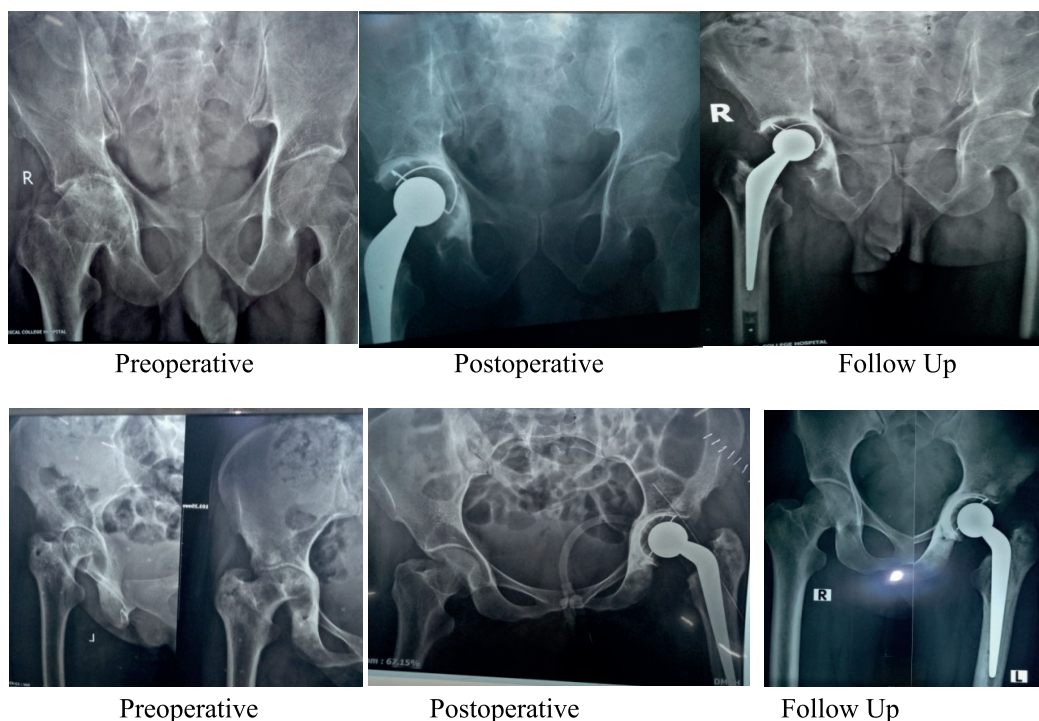


Fig.-1: Pre-operative, Immediate post-operative and sixth week follow up X-ray of two different cases among the 7cases

Discussion:

It is well known that total hip replacement provides improvements in health-related quality of life, pain reduction, and satisfaction after surgery, as also found in our study. The overall initial outcome is showing very promising for running this program in a tertiary government hospital setup. However this effect is thought to be preserved with minimal deterioration beyond the 1-year postoperative period, but slight decline has been observed in patient-reported outcome measures (PROMs) over time in many published literatures⁵.

As the average age of patients in our study was 57 years, it is plausible that the slight decline in the health state of the patient is related to natural aging but it is important to determine whether the improvements in health-related quality of life after THR surgery are long lasting. Few studies have examined the long-term changes in PROMs following THR, and we are planning to examine the long term postoperative outcome of THR in this setup.

The limitation of our study is the small number of the patients and short duration of follow up, but we are expecting to overcome this in near future by promoting this service through public awareness and regular academic seminars.

Conclusion:

THR is now a days a gold standard of practice throughout the world with published journals. We have started this practice in Bangladesh too and this time at DMCH in a large scale. Results are yet to be decided as at least 1 year follow up is required to find out how they do in our local community.

References:

1. Learmonth, Ian D, Prof Cecil Rorabeck PCY. The operation of the century: total hip replacement. *Lancet*, . 2007;370(9597):1580-7.
2. Prospective A. The Influence of Arthritis in Other Major Joints and the Spine on the One-Year Outcome of Total Hip Replacement. 2017;0:1428-37.
3. Callaghan, John J. M.D.; Albright, JAY C. M.D.; GOETZ, Devon D. M.D.; Olejniczak, JASON P. B.A.; Johnston RCMD. Charnley Total Hip Arthroplasty with Cement: Minimum Twenty-five-Year Follow-up. *J Bone Jt Surg*. 2000;82(4):487-97.
4. Bengtsson, Albin Donahue, Gabrielle S Nemes S, Garellick G, Rolfson and O. Consistency in patient-reported outcomes after total hip replacement. *Acta Orthop*. 2017;88(5):484-489.
5. Laura L. Miller Daniel Prieto-Alhambra Lea Trela-Larsen J M. Wilkinson Emma Clark Ashley Blom Alexander J. MacGregor. Revision rates and postoperative mortality following total hip replacement in patients with rheumatoid compared to osteoarthritis: an analysis of data from the national joint registry for england, wales and northern ireland. *Rheumatology*. 2017;56(2):124-32.