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To assess cases of total knee replacement in a tertiary care centre

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Abstract

Background: Total knee arthroplasty has revolutionized the care of patients with end stage arthritic conditions. Increasing life expectancy, growing demand and success of this surgery have lead to significant increase in the number of total knee replacements. The present study was conducted to assess cases of total knee replacement in a tertiary care centre.

Material and Methods: The present retrospective study was conducted in the department of Orthopedics. It comprised of 180 patients of both genders in which TKA was performed. A thorough clinical examination and Radiological assessment was performed. All patients were assessed clinically using the knee society score. Statistical analyses were performed using SPSS 20.0. P value less than 0.05 was considered significant.

Results: In the present study total participants were 180 in which 62.22% were male and 37.77% were females. The clinical outcome was excellent in 81.11%, good in 8.33%, fair in 3.88% and poor in 6.66% cases.

Conclusion: The present study concluded that maximum cases of total knee replacement were in males and clinical outcome was excellent in maximum cases.

Keywords: Total knee replacement, clinical outcome, arthroplasty

Introduction

Total knee arthroplasty (TKA) is one of the most frequent surgical procedures and a very effective treatment option for advanced osteoarthritis of the knee, which decreases pain and improves function [1]. Total knee replacement is one of the most commonly performed orthopaedic procedures all over the world and due to its success its indications have been increased significantly. As a result younger and active patients are also undergoing total knee replacement if indicated. The number of total knee replacements is projected to increase by 601% from 2005 to 2030 [2]. Total knee arthroplasty (TKA) is one of the most common major surgical procedures being performed. Socioeconomic growth in developing countries has made the TKA accessible to a very large population of patients with arthritis [3]. The replacement prosthesis of choice varies depending on the underlying disease, the severity of knee joint damage, and the age of the patient. Total knee arthroplasty is usually performed in patients aged 60 years or older when the bone and articular cartilage are so severely damaged that there is no other effective therapy [4]. Total knee arthroplasty (TKA) is now a reliable treatment for severe arthritis. Various systems are available with specific features regarding the geometry of the components, the degree of conformity of the articulating surface and the anchoring technique. Total joint replacement (TJR) for the management of OA is considered to be one of the most cost-effective operations performed, with well-documented improvements in patient benefits, reducing pain and improving physical function [5-9]. The present study was conducted to assess cases of total knee replacement in a tertiary care centre.

Material and Methods

The present retrospective study was conducted in the department of Orthopedics. It comprised of 180 patients of both genders in which TKA was performed. Before the commencement of the study ethical approval was taken from the Ethical Committee of the institute and all patients were informed regarding the study and written consent was obtained.

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Patients with moderate to severe knee pain, angular knee deformity, knee stiffness (extension lags and flexion contractures) with decreased range of motion, unilateral/bilateral knee involvement were included in the study. Patients with active infection of knee or anywhere in the body, revision arthroplasty, young patients less than 45 years of age, vascular problems (deep vein thrombosis), having periprosthetic fracture, previous implant in knee joint, MRSA positive patients, secondary osteoarthritis-post traumatic/post inflammatory/post infection, patients not consenting for the study were not included in the study. A thorough clinical examination and Radiological assessment was performed. All patients were assessed clinically using the knee society score [10]. Results thus obtained were subjected to statistical analysis. Statistical analyses were performed using SPSS 20.0. P value less than 0.05 was considered significant.

Results

In the present study total participants were 180 in which 62.22% were male and 37.77% were females. The clinical outcome was excellent in 81.11%, good in 8.33%, fair in 3.88% and poor in 6.66% cases.

Table 1: Distribution according to gender

Gender	N(%)
Male	112(62.22%)
Female	68(37.77%)
Total	180(100%)

Table 2: Grading of knee clinical score

Grade	Percentage
Excellent	146(81.11%)
Good	15(8.33%)
Fair	7(3.88%)
Poor	12(6.66%)
Total	180(100%)

Discussion

Nowadays, total knee arthroplasty is becoming a standard treatment for arthritic knee in terms of relief from knee pain free as well as it stabilize the knee with an appropriate range of motion and associated with substantial functional improvement. Significant advances have occurred in the type and quality of the metals, polyethylene, and, more recently, ceramics used in the prosthesis manufacturing process, leading to improved longevity. As with most techniques in modern medicine, more and more patients are receiving the benefits of total knee arthroplasty (TKA) [11, 12].

In the present study total participants were 180 in which 62.22% were male and 37.77% were females. The clinical outcome was excellent in 81.11%, good in 8.33%, fair in 3.88% and poor in 6.66% cases.

TKRs are reported to relieve pain and improve mobility, the best published results reporting a 'good' or 'excellent' outcome in approximately 90% of patients [13]. A total knee arthroplasty is the surgical removal of the diseased joint and replacement with a metal hinge joint (prosthesis) that is attached to the thighbone (femur) and the shinbone (tibia) [13].

In the study conducted by Farahini *et al.* significant improvement in knee society score was observed [14].

A study conducted by Yaratapalli *et al.* showing increased in Knee society score after TKA [15].

Kadam *et al.* conducted a study conducted a prospective analysis of 40 cases of osteoarthritis knee patients at a tertiary care centre

in Mumbai over a period of two years. Those patients who underwent total knee arthroplasty were assessed clinically and functionally using knee society score. The mean preoperative knee clinical score (KCS) was 49.40±13.79 which was increased to a postoperative score of 86.08±5.64 at the end of 6 month. Similarly the mean preoperative knee functional score (KFS) was 32.75±11.79 which was increased to a postoperative score of 84.43±9.59 at the end of 6 month. There was significant increase in KCS and KFC score during follow up at 1, 3 and 6 month interval. There was significant association between knee functional score and knee clinical score at every interval [16].

Conclusion

The present study concluded that maximum cases of total knee replacement were in males and clinical outcome was excellent in maximum cases.

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