

Functional Outcome of Total Knee Replacement in Patients with Rheumatoid Arthritis – A Prospective Study

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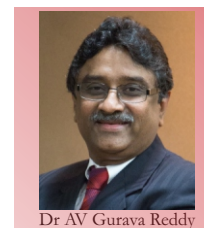
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Abstract: Background: Total knee replacement in rheumatoid arthritis requires special precautions to be taken because of valgus deformity, more blood loss, osteoporotic bone and systemic nature of disease in our study we intend to study functional outcome of total knee replacement in patients with rheumatoid arthritis.

Materials and methods: 34 patients undergoing TKR having rheumatoid arthritis as diagnosis were enrolled. knee society scores done at pre operative period and postoperatively at 3 months, 6 month and 1 year.

Results: We found out that 27 of the 34 patients had excellent functional score , 2 patients had good functional score and 2 patients had fair functional score according to Knee society scoring system at the end of 1 year.

Conclusion: More than 80 percent of patients in our study had excellent functional scores at the end of 1year. Total knee replacement is good surgical option for rheumatoid arthritis of knee.

Keywords: Rheumatoid knee, total knee replacement, functional outcome.

THESIS SUMMARY

Introduction:

The functional outcome for total knee replacement in knee arthritis has been declared excellent, most of the studies done have been for primary osteoarthritis. The available literature for total knee arthroplasties in patients with rheumatoid arthritis is very limited and almost nil specifically for Indian population. Rheumatoid arthritis is a disease which has few features inherent to it that are separate from primary degenerative osteoarthritis. characteristics commonly seen in rheumatoid arthritis are valgus deformity, juxtaarticular osteoporosis, systemic involvement of musculature, upper extremity involvement which affects

rehabilitation, reduced immunity leading to wound healing problems, severe anemia which causes general malaise, younger age at presentation and ipsilateral hip involvement. We believe these characteristics may influence the surgery during total knee arthroplasty and the functional outcome of the surgery. Hence we carried out this study to assess the functional outcome of total knee replacement in patients with rheumatoid arthritis.

Materials and methods:

The subjects in the study were patients with rheumatoid arthritis who underwent total knee replacement. The diagnosis of rheumatoid arthritis was made based on

criterion given by American association of rheumatologists. All the patients in the study were positive for rheumatoid factor. Our study consisted of 34 patients. 28 patients were females and 6 patients were males. The age range of the patients was 40-75 and mean age was 57.6 years. Our patients were from both urban as well as rural background. Baseline scores were measured preoperatively. The patients were followed up regularly for a period of 1 year with knee society scores done at pre operative period, 3 months post operative period, 6 months post operative period and 1 year. As a routine we do cruciate retaining type of total knee arthroplasty at our hospital. However when the patients have

valgus deformity of more than 20degrees or fixed flexion deformity of more than 40 degrees we prefer to do cruciate sacrificing type of total knee arthroplasty. In our study of 34 patients we had 5 patients who underwent cruciate sacrificing type of total knee arthroplasty either because of severe deformity, ligamentous instability or difficulty in soft tissue balancing.

Results:

Patients with total knee replacement has excellent outcome in patients with rheumatoid arthritis. More than 80 percent of patients in our study had excellent functional scores at the end of 1 year. Age of the patient at the time of presentation doesn't have direct linear correlation to functional outcome. The patients in the younger age group had better functional scores than the older age group, however the mean improvement in functional scores was similar in all age groups. Weight of patient also did not show direct linear correlation to functional outcome. Patients in different weight groups showed similar mean improvement in functional scores. However, the morbidly obese patients took longer time to achieve better functional scores when compared to the others. The associated comorbid conditions such as Diabetes mellitus, Hypertension and Coronary artery disease did not influence the functional outcome of the surgery per se. The data in our study group showed significant difference in functional outcome after total knee arthroplasties between the 2 groups. The group where PCL was retained had superior clinical and functional scores compared to the group where PCL was sacrificed. However the difference was more significant in functional scores than clinical scores. Patelloplasty was done in all the patients who underwent total knee arthroplasty in our study.

Conclusion:

In our study we observed and analysed the data of 34 patients with rheumatoid arthritis who underwent total knee arthroplasty without patellar resurfacing. All the patients were evaluated according to knee society scoring system. 3 patients were lost for follow up in our study at the end of 1 year. we found out that 27 of the 34 patients had excellent functional score, 2 patients had good functional score and 2 patients had fair functional score according to Knee society scoring system at the end of 1 year. Total knee arthroplasty in patients with rheumatoid arthritis is a "good surgical option" with about 80 percent of people having "excellent" functional outcome according knee society scoring system.

Key Words:

Rheumatoid knee, total knee replacement, functional outcome.

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