

Primary Constraint Total Knee Arthroplasty As Primary Fixation For Severely Deformed Knees

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INTRODUCTION

Knee-replacement surgery is frequently done and highly successful. It relieves pain and improves knee function in people with advanced arthritis of the joint. A rotating-hinge total knee prosthesis may be utilized for the treatment of global instability or severe bone loss around the knee. The outcome of primary total knee arthroplasty (TKA) using Endo-Modell 3(Link) rotating-hinge prosthesis was evaluated.¹

CASE REPORT

We would like to present five patients that have undergone constraints TKA for severe osteoarthritis as primary fixation. Most of the patients had very bad deformity of the knee and had minimal extension capabilities. The prolonged lack of immobilization of their knees lead to osteoporosis. TKA was done using LINK Endo-Model and a total of four packets of cement was used for each case. Cement was used in view of osteoporotic bone.

Four of the patients have acceptable range of movement and have started back their activity of daily living.

Koss-Jr scoring was used to evaluate post operative outcome³

Table 1: Koss-jr scoring for the 5 cases:

No	Raw summed score	Interval score
Patient 1	16	47.5
Patient 2	9	63.8
Patient 3	8	65.9
Patient 4	6	70.7
Patient 5	7	68.3

The interval score ranges from 0 to 100 where 0 represents total knee disability and 100 represents perfect knee health.

DISCUSSIONS

One of our patients developed bone cement implantation syndrome and we managed it with over-hydration and high FiO₂². Subsequent patients were all managed with over-hydration preoperative and postoperative with close monitoring of fluid input and output..All other patients were free from bone cement implantation syndrome.

CONCLUSION

TKA with a rotating-hinge total knee prosthesis provided substantial improvement in function and reduction in pain.

The use of cement may lead to increase risk of fat and cement embolization and close monitoring or steps must me taken to reduce the risk of these complications².We propose that a rotating-hinge total knee prosthesis may be utilized for the treatment of global instability or severe bone loss around the knee.

REFERENCE

1. Primary total knee arthroplasty using rotating hinged prosthesis for severely affected knees Jas hyuk yang, Jung-Ro Yoon, Chi Hun Oh, Tiak Sun Kim
2. Bone Cement Implantation Syndrome: A Report of Four Cases Pradeep Govil,1 P N Kakar, 2 Deep Arora, 3 Shibani Das,4 Nishkarsh Gupta,5 3Knee Injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR.), English version 1.0