SUMMARY

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CONCLUSION

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Knee arthroplasty has been accepted as a standard procedure in the treatment of advanced arthritis of the knee with deformities. It is designed to relieve pain, provide motion, stability and correct deformities.

The aim of this work was to evaluate the results of total knee arthroplasty in severely arthritic knees as regard the function of the knee.

This study was conducted on 36 cases of severely arthritic knees. The sex distribution of the patients was 25 females and 11 males. The aetiology of arthritis was osteoarthritis in 27 cases and rheumatoid arthritis in 9 cases. The age of the patients ranged from 30 to 78 years, with a mean age of 65.7 years. Twenty cases were right and sixteen cases were left side.

Twenty six cases (72.2%) had varus deformity and 10 (27. 8%) cases had valgus deformity. The mean angle of varus deformity was 21.3 degrees, while for valgus was 22.1 degrees.

All cases were treated by total knee arthroplasty between January 1996 and January 1999. Cases were assessed pre and postoperatively according to the standard HSS scoring system. The minimum period of follow up was 6 months. The mean preoperative score was 40.4 points while the mean postoperative total score was 80.8 points.

Thirty one cases (86.1%) gave satisfactory results, and 5 cases (13.9%) cases gave unsatisfactory results. There was no significant relation between age, sex, aetiology, type of deformity and the overall results.

All cases were operated upon using posterior stabilized prosthesis except one case who had the replacement with posterior cruciate retaining design. This case had fixed flexion deformity at the follow up; however, this case was graded as satisfactory result.

The patella was resurfaced as a routine step in the operation; however, ten cases had no resurfacing of the patella as they looked normal during surgery. One of these 10 cases developed persistent retropatellar pain at the follow up and graded as unsatisfactory result.

Three cases had bone graft of the medial tibial condyle at surgery. The graft was taken radiologically during the period of the follow up.

Twelve cases had lateral retinacular release during surgery for patellar maltracking. Non of these cases developed patellar instability nor any symptoms related to the release. These cases were graded as satisfactory.

Pain relief was the most important achievement after the operation. Pain on walking had improved from 0.61 preoperatively to 14.08 postoperatively. knee function had improved as well as a result of pain relief and restoration of normal alignment and mechanics.

Seven cases (19.4%) developed complications related to the arthroplasty during the immediate or late postoperative period. The complications met within this study were wound healing problems, foot drop, recurrent dislocation of the extensor mechanism, and persistent retropatellar pain.

CONCLUSIONS

1. Total knee arthroplasty is a very reliable method of treatment in cases of advanced arthritis of the knee.

2. Severe angular deformity is not uncommon finding in cases of arthritis indicated for total knee arthroplasty.

3. Pain relief is the main goal of total knee replacement. Improvement of the knee function comes secondary to pain relief.

4. Ligament release and balancing is the key of success of the operation, otherwise, deformity and /or instability will persist.

5. Posterior stabilized knee prosthesis is the most suitable design for cases of severe deformities as release of the posterior cruciate ligament is an important step in correction of the deformity.

6. At least 90 degrees of knee flexion is necessary to carry on daily activities. Measures should be taken to achieve that degree of flexion, this necessitate correct operative balancing and postoperative rehabilitation.

7. Postoperative fixed flexion deformity is an operative mistake and it is impossible to correct by physiotherapy. Efforts should be done to achieve full extension of the knee during surgery.

8. Wound leakage and break down could delay the postoperative rehabilitation, and hence, the final result. Care should be taken not to devitalize the edges of the skin flaps.

9. Lateral retinacular release should to done at the time of surgery if patellar maltracking happens on flexion of the knee with no thumb technique.

10. Proximal realignment of the extensor mechanism should be considered in cases of prior patellectomy as there is tendency for postoperative extensor mechanism subluxation. This should be decided at the time of surgery.

11. Patellar resurfacing should be considered as a routine step of the operation as no single method can anticipate the postoperative non symptomatic patella.

12. Most of the tibial defects can be managed without bone graft. However, in big, deep defect, bone graft should be carried out with internal fixation of the graft.

13. Most of the cases of foot drop occur as a result of traction injury to the lateral popliteal nerve. Early management helps the recovery of the nerve.

14. Surgeons should emphasize that after total knee arthroplasty, the patients cannot do acts that necessitate full passive flexion of the

knee such as squatting and kneeling. If the patient insists on these acts, this should be considered as a contraindication for knee arthroplasty.