# Summary and Conclusions

# SUMMARY AND CONCLUSIONS

Total hip replacement is one of the most commonly performed Orthopaedic procedures.

The Two main types of total hip replacement which are usually employed are cemented and cementless THR.

The complications of THR can be classified as intraoperative complications such as neurovascular injuries, early post operative complications such as infection, dislocation and thromboembolic complications and finally late postoperative complications such as loosening, fracture of the femoral component and ectopic ossification.

Revision of total hip arthroplasty is much more diffecult and the results not as satisfactory as after a primary total hip arthroplasty.

In this thesis, a retrospective evaluation of 30 cases (34 hips) treated by both cemented and cementless THR was done. 18 hips were replaced by cemented THA and 16 hips by cementless THA.

The mean age of patients having cemented THR was 50.12 year and for patients having cementless THR was 45.78 and the follow up period for cemented THR was from 5 to 13 years and for cementless THR was 2.5 to 4 years.

All patients were assessed and evaluated according to the evaluation system adapted by Pellicci et al., (1985) as it has the advantage

over other scoring systems of incorporating the roentgenographic data with the clinical data in assessing the results of total hip replacement. 40 points of the scoring system were given to the clinical evaluation which evaluates the clinical condition of the patient regarding pain, walking, function and motion and muscle power and 20 points were given to the radiographic evaluation which constitutes both acetabular and femoral radiographs.

The final overall evaluation results for cemented THR were excellent in 6 hips (33.33%), good in 6 hips (33.33%), fair in 4 hips (22.23%) and poor in 2 hips (11.11%) and for cementless THR were excellent in 4 hips (25.00%), good in 11 hips (68.75%) and fair in only one hip (6.25%) and there was no statistically significant difference between both groups regarding the total score although the follow up period for cemented THR was much higher.

***Coming to conclusions, certain data could be know from this study :***

1- Total hip replacement is a reliable surgical procedure for the treatment of advanced cases of hip artheritis.

2- Materials selected for joint replacement should be adequately fatigue resistant in order to withstand weight – bearing stresses. Wear must be minimal, and the level of frictional resistance reduced to a minimum in order to protect the fixation from excess stress.

3- To prevent loosening, one should preserve the supporting bone at the site of fixation and use a prosthesis with low frictional torque.

4- The stresses on the artificial joint may be reduced by reducing the load by weight loss of the patient, reducing the body – weight moment arm by deepening of the acetabulum and increase the gluteal arm via lateral transfer of the greater trochanter, which is rarely used now.

5- Of all causes of failure of total hip arthroplasty, perhaps proper selection of the patients, preoperative planning and good surgical technique are the most important aspects in preventing failure

6- Cemented total hip arthroplasty is a very good method for treating artheritic hip joint. Although the incidence of loosening and other complications was higher with the use of old prosthesis designs but the complication rate can be reduced to a much greater extent with the use of the new designs of the prosthesis and the modern cementing techniques.

7- Although the short term results of cementless THR were encouraging, the intermediate and long term results showed that the complication rate is similar or even higher than that of cemented THR and the incidence of thigh pain and femoral component loosening is much higher than those of cemented THR.

8- Hybrid total hip replacement is a good and reliable combination of both cemented and cementless components (cementless cup and cemented stem) and it combines the advantages achieved from each of both techniques.

9- The final Conclusion is that cement should be used for fixation of the femoral component in all THRs, regardless of whether it is a primary or revision procedure, regardless of the age or sex of the patients, and regardless of their diagnosis or activity level.