Total knee replacement using mobile bearing prostheses

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Knee replacement surgery is generally recommended for with severe knee pain and disability caused by damage to cartilage from osteoarthritis, rheumatoid arthritis or trauma. It is highly successful in relieving pain and restoring joint function. There are more than 150 knee replacement designs on the market today.Conventional fixed-bearing knee prostheses have proved clinically successful with very favorable results at 10 to 15 years. However, with only a few exceptions, these results have been obtained in older, less active patient populations.Since the late 1970’s there have been a steady stream of studies examining total knee implants using the concept of mobile bearing.Mobile bearing designs in total knee arthroplasty implant systems are deign to reduce contact stresses transferred to the polyethylene and bone-prosthesis interface via increased conformity of the femora-tibial articulation and movable tibial polyethylene inserts.Mobile bearing arthroplasty does not have specific indications or contraindications other than those of ordinary fixed bearing designs, however, mobile bearing prostheses are preferred for young, obese and active patients. As those patients may place increased loading demands on the knee.Mobile-bearing prostheses are categorized on the basis of the degree of articular surface conformity; either partially or fully conforming. A third category -has been introduced: the posterior stabilized meniscal-bearing prostheses.Mobile bearing knee designs offer the advantage of maximally conforming geometry while -diminishing constraint forces to fixation interfaces through plateau mobility.Mobile bearing prostheses can be classified according to type of mobility of the bearing into; rotating platform design and meniscal bearing design.In this study, thirty-five patients with knee arthritis, who had the decision of total knee arthroplasty as a solution of their knee problems, were selected.All had a cemented mobile bearing knee prosthesis implanted. Operations were done in Benha University Hospitals. Follow up period range from twelve to twenty-four months with an average of eighteen months.Five patients was lost to follow up, so the total study group consists of thirty patients with a total number of 35 knee prostheses used because of the presence of fifteen cases with bilateral knee arthroplasty.Results of this study are evaluated with guidance of H.S.S. knee score. They are presented in the form of tables, bar graphs and pie charts.ConclusionAccording to results of our study we can recommend using of mobile bearing prostheses as a recent solution for obese ,young active patients with knee pain due to osteoarthritis or rheumatoid arthritis to improve quality of life for those patients.while in patients with ligamentous

instability fixed bearing prostheses is preffered option.