INTRODUCTION

Because of the extremely limited potential of damaged articular cartilage for either repair or regeneration and the fact that prosthetic replacement is contraindicated for children and young active adults the need exists for methods of producing biological resurfacing of large full thickness defects in diseased or damaged joint by transplantation of a tissue that has significant chondrogenic potential ***(O'Driscoll et al., 1986).***

Biological arthroplasty that aims at the regeneration of a neo-cartilaginous surface with the aid of either autograft, allograft or other chondrogenic biological tissue is applicable to younger patients as the new joint surface may have the potential to last for long periods than artificial materials. ***(Woo et al., 1987)***

Rubak et al., 1982 used free periosteal grafts to resurface defects in the knee joints of rabbits and concluded that motion seems to be very important in regulation of chondrogenesis.

Homminga et al., 1990 stated that chondral lesion of the knee not only interfere with work and sport but also predispose to arthritis and also stated that spontaneous healing is by fibrocartilage which cannot withstand mush force so they try grafting the defect with an autologous piece of perichondrium from a rib and anchor it with fibrin glue.

The history of periosteal transplantation begins with the studies of ollier in 1867 as quoted from ***Ritsila et. al., 1994*** and several researchers have confirmed that the cells of the potential to produce bone. Meanwhile

the circulation of the recipient bed and the subsequent oxygen tension seam to regulate the behavior of mesenchymal cells. High oxygen tension favors the production of bone and low oxygen tension increases the production of cartilage type tissue .The potential to produce cartilage in a chondrogenic milieu has found clinical applications because repairing articulator cartilage defects is one of the important problems in orthopedic surgery. ***(Ritsila et al., 1994).***

Various experimental approaches to biologic joint resurfacing have been tried including whole joint allografts, massive osteochordral allografts, osteocartilaginous shell allografts, cartilage tissue, chondrocyte grafts and interposition arthroplasties using a variety of materials (***Kreder et al., 1994)***