

# EFFECT OF PROGRESSIVE EARLY LOADING OF PUNCH IMPLANTS ON SUPPORTING STRUCTURES IN IMPLANT RETAINED OVERDENTURES

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## ABSTRACT

Ten male completely edentulous patients participated in this study. Their ages ranged between 50 and 65 years. They were unable to adapt to their conventional prostheses and were complaining of their lower dentures particularly in respect of retention and stability. Patients asked for a better, less time consuming and easy prosthetic rehabilitation. They were supplied by maxillary conventional complete dentures and mandibular overdentures retained by two self threaded endosseous root form implants placed in canine regions. Patients were divided into two groups. The experimental group was rehabilitated according to progressive early loading protocol while the control group was rehabilitated according to classic delayed loading protocol. Ball attachments were used to retain the overdentures in both groups. Follow up observation period extended up to 12 months after overdentures insertion. Peri-implant supporting structures were assessed both clinically and radiographically. Results of the study, indicated that rehabilitation of maladaptive complete denture wearers with an implant overdenture retained by ball attachments is a satisfactory treatment plan and was welcomed by patients. The study revealed that the effect of both loading protocols on supporting structures were within the same range.

## INTRODUCTION

It is well known that with the use of conventional complete mandibular dentures, there is an ongoing loss of the superior surface of the body of the mandible (1,2). Subsequently, atrophy of the edentulous mandible takes place accompanied by reduction in retention, stability and load bearing capacity of the complete denture resulting in compromised function and loss of facial form (3,4). It must simply be accepted that many patients who wear complete dentures either do not like the experience, have unrealistic functional expectations

or encounter difficulty adapting to their prostheses. Others may have adapted to dentures for several years and then became maladaptive as a result of regressive tissue changes or systemic health related considerations, when it becomes clear that conventional complete denture therapy is not the solution for the patient's edentulism and using an endosseous dental implant could be suggested as an effort to treat or preclude maladaptive denture behavior(5). The literature reports that treatment of fully edentulous mandibles with implant retained overdentures has become a recognized form of therapy (6,7,8).

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