

Engineering: 7th Sense in Dentistry

Harsh Vardhan Singh

Govt. Dental College & Hospital, Patiala, India
E-mail: hvsarora@gmail.com

Background

The human character of curiosity to explore new things is as old as history of mankind and when he starts exploring different streams of science, it creates wonders. So, let's engineer dentistry. For a long time, Prosthodontics therapy focused mainly on the technical and clinical expertise required to fabricate complete dentures. This approach helped nurture the development of new ideas. The masticatory functions depend upon muscular forces and facility with which the patient is able to coordinate with these movements. But in complete denture wearers, computed tomographic study of masseter and medial pterygoid muscles have demonstrated greater atrophy and so is the reduced biting force. The sequelae of this is impaired nutrition and this leads to poor and debilitated health in old age. The condition becomes worse in which motor control of muscle is affected as in Parkinsonism and Myasthenia Gravis (disorder which interfere with impulses and hence results in weak, easily fatigued muscle). Further more to attenuate problems of elderly debilitated patients in which denture wearing, its retention and mastication is almost impossible.

Aims & Objectives

To make a type of denture: ELECTRONIC DENTURE.

Material & Methods

High strength heat cure denture base material

(Lucitone, Trevalon) or metal base base gold or cobalt chromium. After diagnosis and treatment planning for implants; Implants will be placed in the mandible in routine protocol. Implant prosthesis electric denture will be constructed in two parts. The lower part will be fixed over the implants and between two parts of denture, biocompatible sensors will be placed (which can be manipulated with the help of remote outside the mouth). But the movement of second half of lower denture would be such with the remote that lower half of lower denture remains fixed to ridge and occlusal half of denture maintain contact during movement.

Results & Conclusions

ELECTRONIC DENTURE will have fixed base (implant supported for retention) and mobile teeth. The chemical sensors will be placed in the denture that will get stimulated on receiving the food, resulting in activation of tactile sensors further activating the spring loaded teeth which may serve the purpose of mastication, The synchronization of these two sensors prevent tongue and cheek biting overcoming the drawback of complete denture in which tongue and cheek biting is seen. In short, weakness of muscles will be taken care by movement of teeth. This is done view of bringing renaissance to patients who have motor disabilities. This is a humble attempt by me. It is mere thought that has to be churned into action. Research work and brilliant minds, when shall come together, will prove to be a boon for this noble idea.