

## **ELECTRON MICROSCOPIC STUDY OF THE MUCOUS MEMBRANE COVERING DYNA IMPLANT**

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### **ABSTRACT :**

Root form implants are constructed in two types: cylindrical and screw types. Dyna implants are screw type, two stage made of titanium alloy with hydroxyapatite coating. This system is characterized by its non-complicated surgical and prosthetic procedures. The present study was undertaken to evaluate the mucous membrane covering the Dyna implant before fixation of the prosthetic part, using electron microscope. After the insertion of implants in the maxilla and in the mandible according to the surgical procedures for dental implants, then six months and three to four months respectively later, the biopsy taken for EM examination. The different epithelial layers and lamina propria in the experimental group showed cellular changes when compared with those in the controls, which mean that there was an ultra-cellular reaction against this type of implant.

### **INTRODUCTION**

Different types of dental implants (as tooth substitutes) have been widely used for fixed or removable appliances in the oral cavity. Because implants like teeth are transmucosal devices and as such penetrate the oral mucous membrane, the peri-implant tissues are expected to exercise a protective barrier function. It is still not clear whether the peri-implant mucosa is able to provide barrier properties (Cochran<sup>(1)</sup>, and Fritz<sup>(2)</sup>).

The post implant insertion and fixation of the prosthetic part, complications, such as mobility and periodontal pockets formation are the most of them. Most of the studies that have been done on the mucous membrane surrounding the dental im-

plants were done at the light microscopy level. These pushed us to investigate the effect of the implant (Dyna) on the mucous membrane covering it, as the oral mucosa has an important role in sealing the neck of the implant and prevention of implant failure.

### **MATERIALS AND METHODS**

Eight patients (30-50 years) were considered for conduction of this study, using Dyna implants (which is one of root form dental endosteal, screw two stage implants made of titanium alloy with hydroxyapatite coating, suspended on a plastic holder, provided with a titanium cover screw to prevent bone and granulation tissue in-growth during integration period; and this system is characterized

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