

## ROLE OF SPECIAL ELEMENTS IN COUNTERING THE TIPPING OF REMOVABLE DENTURE CLASPS

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Because the partially removable clasp prosthetic device is a unitary, rigid and undeformable construction, it's subject to tipping because the segments opposite to the one we mobilize will move at the same amplitude but in reverse. This tipping, which is caused by the imbalance between resistance and sollicitation on certain constructive segments of the partially removable prosthesis, is produced by rotation. To counter the tipping we have to solve two categories of issues: balancing the constructive ensemble of the partially removable prosthesis on the prosthetic field and equipping the partially removable prosthesis with special elements. Specific for countering the tipping is the way we place the support, maintenance and stabilization elements with anti-tipping effect. The technical solution for both category issues is removing the factors which determine the appearance of the tipping axis.

**Key words:** clasps prosthesis, extracoronary slips, basculation, friction bar.

## IN VITRO STUDY ON DETERMINATION OF CALCIUM RELEASE LEVEL IN ENAMEL EROSION AND INFLUENCE OF ACQUIRED ENAMEL

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**Materials and Methods:** The purpose of this study was to evaluate dental erosion in 0.1 and 1.0% citric acid in vitro by several different methods and to assess the protective potential of experimentally formed salivary pellicle (24 h in vitro). Enamel slabs were embedded in epoxy resin and polished. Erosion was performed in citric acid for 1, 5 or 10 min and recorded as calcium release.

**Results:** Significant calcium release on non-pellicle-covered specimens was measured after 1min exposure to 0,1 % citric acid. Calcium dissolved was time and concentration dependent. Salivary pellicle significantly inhibited both calcium releases, except after 10min immersion in 1,0% citric acid.

**Discussion and conclusions:** The results support the general conclusion that salivary pellicle effectively protects enamel surface against short-term erosion in organic acids.

**Key words:** calcium release, acquired enamel pellicle, dental erosion, in vitro study.

## THE ACQUIRED ENAMEL PELLICLE – NATURAL PROTECTIVE FILM OF THE TEETH

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**Materials and Methods:** The purpose of this study was to evaluate dental erosion in 0,1% and 1,0% citric acid in vitro by several different methods and to assess the protective potential of experimentally

formed salivary pellicle (24 h in vitro). Enamel slabs were embedded in epoxy resin and polished. Erosion was performed in citric acid for 1, 5 or 10 min and recorded as calcium release.

**Results:** Significant microhardness loss on non-pellicle-covered specimens was measured after 1min exposure to 0,1 % citric acid. Microhardness loss was time and concentration dependent. Salivary pellicle significantly inhibited microhardness loss, except after 10min immersion in 1,0% citric acid.

**Discussion and conclusions:** The results support the general conclusion that salivary pellicle effectively protects enamel surface against short-term erosion in organic acids.

**Key words:** acquired enamel pellicle, dental erosion, in vitro study, microhardness, microscopic scanning.

## EFFICIENCY OF MANDIBULAR ADVANCEMENT DEVICES IN THE TREATMENT OF LIGHT SLEEP APNEA

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**Introduction:** The study has proposed a preliminary assessment of the effectiveness of using mandibular advancement devices to treat sleep apnea, snoring and mild ronchopathy.

**Materials and methods:** The study was designed to perform a preliminary assessment of the efficiency of the use of mandible advancement devices for treating light snoring (ronchopathy) and sleep apnea. In order to perform this study we investigated 21 patients that came to the Pneumophthysiology Clinic in Iasi between 2006-2008, of whom 15 were men and 6 were women aged between 31-52 years, (average age 41.5 years), for night breathing problems.

The patients experienced day fatigue, focusing difficulties, apnea reported by their family, night saliva loss and snoring. The exclusion criteria were chronic heart failure, diabetes and severe OSA suspicions. All the patients were subjected to OSA investigations by means of sleep respiratory polygraphy in order to diagnose a possible sleep apnea and to determine the type of adequate treatment for each patient. Depending on the AHI, the patients were classified either as suffering from a light OSA (AHI = 5-15/hour), or as not suffering from OSA at all (AHI<5/hour) but only ronchopathy, the latter being sent to the Gnato-Prosthetics Clinic Iasi for dental investigations.

The oral devices used were Somnoguard, Somnofit and individualized guards. We monitored to the efficiency of these devices in light OSA and ronchopathy and the patients compliance to them.

**Discussions:** Somnoguard system trays system was first used to treat mild AOS. It is easy to apply, is compact, but mandibular advancement is limited, they are standardized by the manufacturer. Somnofit system is an improved version, trays are paired, mandibular advancement is done using elastic orthodontic and is much higher compared Somnoguard. We used this system as an alternative to Somnoguard and in patients with low overbite accentuated overjet. Individual devices have emerged as a solution designed by our team to treat AOS through oral devices. The first attempts were rigid trays for bruxism solidarity that generate excessive forces on the teeth and ATM.

**Conclusions:** Mandibular advancement devices may be used in patients with mild desaturation in O<sub>2</sub>, low daytime sleepiness, low frequency of apnea, intolerance to nasal positive pressure ventilation (CPAP) and those who refuse surgery. Oral appliances are a good solution to treat snoring and mild AOS. Individual guards were well tolerated, adapt better than systems Somnofit / Somnoguard, are more