

YOUNG PATIENTS' PERCEPTION ON DIFFERENT SURGICAL MANAGEMENT OF THE DISTO-OCCLUSAL GINGIVAL OPERCULUM IN SECOND MANDIBULAR MOLARS

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YOUNG PATIENTS' PERCEPTION ON DIFFERENT SURGICAL MANAGEMENT OF THE DISTO-OCCLUSAL GINGIVAL OPERCULUM IN SECOND MANDIBULAR MOLARS (Abstract) **Aim:** This baseline study aims to find out the young patients' perception on different surgical management of the disto-occlusal gingival operculum in second mandibular molars: the conventional technique and the laser assisted one. **Material and Methods:** The current study included a batch of 20 patients who needed surgical bilateral removal of the disto-occlusal operculum in second mandibular molars order for them to receive conservative treatment. Each patient benefited of two different surgical techniques (laser assisted and conventional). Patients' perception towards these procedures was evaluated with a simple questionnaire. **Results:** The questionnaires were evaluated by a specialized team and the results were illustrated in the specific charts. On one hand the conventional technique wasn't perceived as very comfortable and on the other hand the laser assisted technique was very well perceived by the patients. **Conclusions:** The overall perception of young patients towards laser assisted periodontal surgery was very high and this is a means of reducing operating time and anxiety caused by the surgery itself. **Keywords:** DISTO-OCCLUSAL OPERCULUM, PERCEPTION, DIODE LASER.

After Caranza et al (1) the space between the crown of the tooth and the overlying gingival flap called operculum is an ideal area for the accumulation of food debris and bacterial growth. Although in some cases there are no clinical signs or symptoms, the gingival flap is often chronically inflamed and infected and has varying degrees of ulceration along its inner surface.

In general the acute inflammatory involvement is a constant possibility and may be exacerbated by trauma, occlusion, or a

foreign body trapped underneath the tissue flap.

This is a reason why the surgical management of this soft tissue in young patients should be a contemporary preoccupation both for the periodontist and for the pediatric dentist. This baseline study aims to find out the young patients' perception on different surgical management of the disto-occlusal gingival operculum in second mandibular molars: the conventional technique and the laser assisted one.

Young patients' perception on different surgical management of the disto-occlusal gingival operculum in second mandibular molars

MATERIAL AND METHODS

The current research included a sample population of 20 patients with ages between 13 and 16 years old. The patients were selected from the Department of Pediatric Dentistry and the Department of Periodontology in the University of Medicine and Pharmacy "Grigore T. Popa" from Iasi.

All the patients needed bilateral surgical removal of disto-occlusal operculum on the second mandibular molar (fig. 1, 2). This periodontal surgical procedure was needed in order to treat the cause of local inflammation and to provide proper access to the pediatric dentist for the restorative procedures on these teeth.

Every patient was surgically treated bi-

laterally but using different techniques. In one quadrant the patient received conventional surgical treatment and in the opposite quadrant the surgery was done using a diode laser with a 940 nm wave length and a 1.5 W energy. The surgeries were done separately, first the conventional technique and afterwards the laser assisted surgery. For safety reasons both surgeries were done under local anesthesia (fig. 3).

After the healing period of both surgeries the youngsters were asked to complete an easy questionnaire evaluating their perception regarding the two different periodontal surgical procedures and the post-operative recovery. The questionnaire was containing five questions both for the first and for the second surgery (fig. 4).



Fig. 1. Initial clinical aspect



Fig. 2. Marking of the incision line



Fig. 3. Immediate post op aspect



Fig. 4. Clinical aspect 7 days after the surgery

RESULTS AND DISCUSSION

The questionnaires were evaluated by a specialized team and the results were illustrated with the help of the specific charts.

On one hand the conventional surgical technique (fig. 5) proved not to be very comfortable for the young patients and also was perceived as a source of great anxiety. Other authors claimed as well in their works that traditional gingivectomy proce-

dures have been a challenge for dentists who confront issues of patient cooperation and discomfort (2).

On the other hand 90% of the patients reported that they felt well and excellent during the laser assisted surgery (fig. 6) which is a significantly better perception of the surgery compared to the conventional one. Other published research showed that laser soft-tissue surgery is very well accepted by children (2).

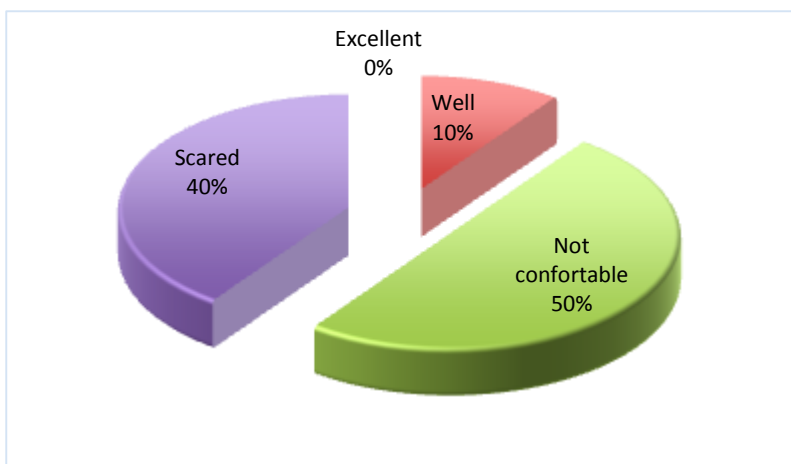


Fig. 5. Perception of comfort after the conventional surgery

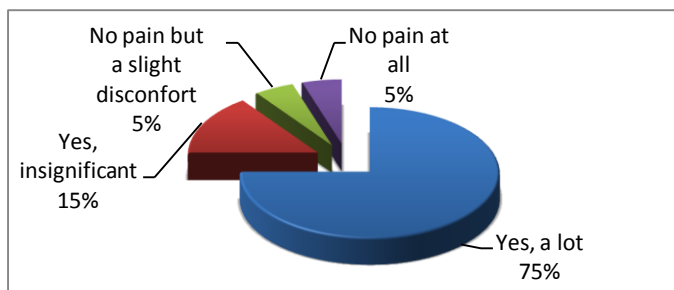


Fig.7. Perception of pain after the conventional surgery

A large majority of 75% of the patients reported that they felt a lot of pain (fig. 7) during their post operative period after the

classical surgery due to the inflamed area that was removed and the scalpel cut.

The recovery period after the laser sur-

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gery was perceived far better by the patients where most of them didn't experience pain but only a slight discomfort (fig. 8). The ones that reported that they felt pain said that the intensity of it was insignificant. The absence of pain can be justifi-

fied by fundamental research which proved that the morphological differences identified at the gingival epithelium level and subjacent *lamina propria* support the value of laser therapy, stimulating an improved healing of the damaged tissues (3).

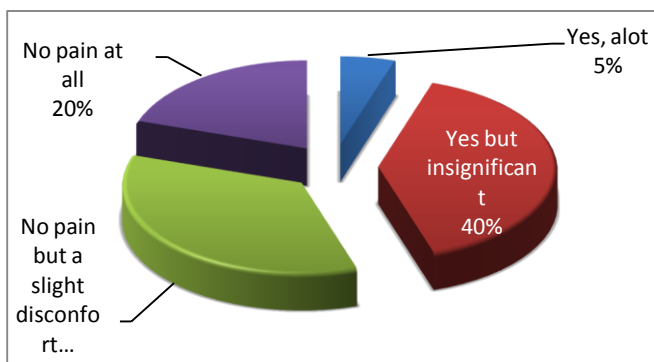


Fig. 8. Perception of pain after the second surgery

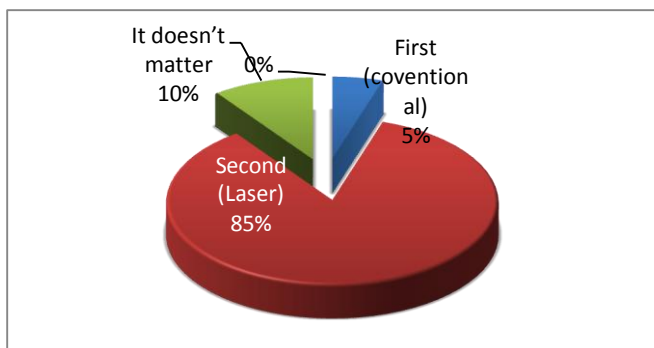


Fig. 9. Preferred treatment if the patients had to choose

If the patients had to choose between the two techniques it was shown (fig. 9) that a significant percentage of 85% would choose the laser surgery rather than the classical technique.

We do not subscribe to other authors' opinion regarding the low level of appropriateness of using diode lasers in different dental specialties (4) and we encourage this

minimally invasive approach.

From the training point of view, although a diode laser was the most common type of laser used, of the eight postgraduate orthodontic programs in USA and Canada (22 percent) not offering laser training, four indicated having no plans to begin using lasers or training on their use (5).

We should focus more on implementing

the lasers in the postgraduate departments of the universities especially because of the high level of patients' perception.

CONCLUSIONS

This study confirmed that the conventional technique took the periodontist more time than the laser assisted one and this was due also to the poor cooperation of the young patients when they saw the surgical instruments. The laser assisted technique was faster and with a better cooperation

from the patient's side.

The overall perception of young patients towards laser assisted periodontal surgery was very high and this is a means of reducing operating time and anxiety caused by the surgery itself.

It can be concluded that a tight cooperation should be established between the periodontist and the pediatric dentist in order to achieve optimal results both from the clinical and from the patient's perception point of view.

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NEWS

MICROGLIA: SCAPEGOAT, SABOTEUR, OR SOMETHING ELSE ?

Microglia is normally composed of cells which are distributed in brain and also in spinal cord, displaying a distinct immune potential. They can be mobilized and efficiently involved in a specific cellular immune monitoring activity, in case of tissular injuries or specific neurological diseases. The common opinion that the activation of microglia is neurotoxic is widely accepted, but it seems that the most dramatic instance of activation is represented by prion disease. Every failure to destroy prions can transform microglia in a real saboteur which spread the disease. On the other hand, aged or sick microglial cells can not perform an adequate synaptic remodeling-these dysfunctions contribute to neurodevelopmental or psychiatric disorders. Experimental studies sustain now that microglia has distinct actions in distinct circumstances. The understanding of its role in health and disease requires new tools to explore microglia, based on fact that the CNS and the immune system are intimately connected. (Aguzzi A, Barres BA, Bennett ML, *Science* 2013, 339(6116): 56-61)

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