

ESACROM RESEARCH AND DEVELOPMENT DEPARTMENT

PRESENTS

“THE ULTRASOUNDS IN DISSOCIATION OF TEXTILE FABRICS OF DIFFERENT ELASTICITY AND TEXTURE”

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INTRODUCTION

The advent of ultrasonic technology in the field of oral surgery has allowed the use of minimally traumatic and invasive clinical procedures capable of ensuring predictable results for the patient. Born with the intent to overcome the limits of traditional rotating instrumentation in osteotomy and osteoplastic techniques, it was thought to extend its use to the dissociation of tissues with different elasticity and consistency. In particular, this use goes from the detachment of the periosteum mucus flap that is to the «atraumatic» separation of the periosteum from the bone, to the skeletonization and enucleation of neoformations of soft consistency present inside the maxillary bones such as cysts of various nature or removal of granulomatous tissue for endoalveolar cleaning after extractive maneuvers in order to create the best biological conditions to accelerate healing processes and, if necessary, allow immediate insertion of an installation.



We want to thank Dr. Michele Antonio Palancia for the collaboration.

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PROTOCOLS OF USE

TISSUE DETACHMENT: the use of an ultrasonic insert for the detachment of a mucus-periosteal flap contributes to the reduction of surgical trauma presenting promising implications in terms of preservation of vascularization and preservation of anatomical architecture. From a technical operational point of view, this manoeuvre has the following advantages:

- 1)** facilitating the lifting of the flap especially when there are adhesions between the flap and the underlying structures;
- 2)** reduction of the risk of accidental tearing;
- 3)** improving the visibility of the operating field. The application of the protocol provides for the choice of inserts with the forms suitable for the detachment properly combined with the parameters power (U) vibration (V) flow rate of the peristaltic pump (P) that take into account the type of the flap (thickness, keratinization) and its anatomical seat.

The inserts used are:

- **ES003DT; ES003BT; ES010T; ES009NT; ES005T.**

The flaps considered according to the macroscopic characteristics and anatomical seats are:

- Vestibular adherent gums.
- Alveolar mucosa.
- Fibromucosa palatale.
- Fibromucosa of the retro molar trine.



For the detachment of the gingiva keratinized vestibular is used the insert **ES009NT** with values of $U=12$ $V=20$ $P=100$, which thanks to its triangular shape is able to wedge along the line of incision and to allow the use of the insert **ES003DT** used with the same parameters that completes the disconnection started previously. In any case, it should be kept in mind that no pressure should be exerted on the handpiece in order to avoid damage to the bone by making the insert work autonomously and supporting its natural progression thanks to the cavitation effect.

For the fibromucosa palatina if the incision is intrasulcular it begins with the **ES009NT** to values of U=20 V=40 P=100 and then it continues with the **ES010T** set to U=40 V=80 P=100 in case of considerable thicknesses while for smaller thicknesses can be used the **ES003BT** with values U=20 V=40 P=100 (even if the risk of breakage of the insert is high); as an alternative to the ES010T always for thick fibromucous membranes and well attached to the floors below you can use the insert **ES005T** with values U=50 V=80 P=100. In the case of less thick fabrics, it is advisable to set the **ES003DT** insert U=20 V=40 P=100 and then switch to the **ES003BT** insert (keeping the same parameters) for a larger size of the working part.



In the case of the area of the trine retromolar the detachment must be performed more gently due to the proximity of the lingual nerve: You can start with the insert **ES003DT** with parameters U=12 V=20 P=100 and then increase U=20 V=40 P=100 and eventually complete the disconnection with the insert **ES003BT** using the same parameters.

REMOVAL OF INTRA-OSSEOUS SOFT CONSISTENCY FORMATIONS: enucleation of cysts, granulomas and other soft-textured neoformations that develop in the bone structure of the maxillary bones, is particularly facilitated when carried out by the use of ultrasonic technology. The use of inserts is based more on their ability to dissociate structures with different elasticity and consistency rather than on a direct action of resection; the progression of the working end through the tissues takes place under conditions of high safety and can be easily supported as it is made possible by the shock wave cavitation rather than its cutting capacity.

Soft neoformations of large size. After drawing and lifting a flap from the bone plane, we proceed to the erosion of the cortical if present using appropriate inserts completing the operation with the insert **ES003DT**. Once an adequate access is gained, the ES003BT insert is processed at the interface between the soft neoformation and the bone cavity in order to operate a progressive cleavage of the lesion. The parameters of use of both inserts must never be excessive, therefore they must not exceed the values of $U=20$ $V=40$ $P=100$ thus avoiding to tear the neoformation and thus lengthen the time for its complete enucleation.



Chronic inflammatory apical processes. Its particularly small size and the ability to penetrate deep inside an extractive cavity, make **ES003DT** the insert particularly suitable for the removal of apical granulomas. The use of this tip should be carried out at parameters of $U=12$ $V=20$ $P=100$ and should be extended beyond the time necessary for the removal of the soft tissue in order to thoroughly cleanse the medullary spaces so as to accelerate the healing processes, especially in the case of immediate implant insertion. The same considerations can be extended to the removal of soft tissue in case of apicetomy.



USE

- DETACHMENT OF TISSUES
- REMOVAL OF NEW SOFT FORMATIONS AT THE INTRAOSSEOUS SITE

DEDICATED TIPS e PARAMETERS

ES003DT	ES003BT	ES009NT
		
ES010T	ES005T	
		

	ES003DT	ES003BT	ES009NT	ES010T	ES005T
U	20	20	12	40	20
V	40	40	20	80	40
P	100	100	100	100	100
MAX POWER	40	70	60	70	70

U: Suggested power

V: Suggested vibra

P: Suggested water pump

MAX POWER: Max power which can be used with the insert

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