INTRODUCTION

The corticotomy consists of a surgical maneuver in which a cut or perforation is made in the cortical portion of the bone, it can be performed with hand cutting instruments such as low or high speed rotary and piezoelectric instruments; all these with abundant irrigation. Through this procedure, osteoclasts and osteoblasts are activated, facilitating dental movement with a favorable response for bone. The objective of this process is to pass through the cortex and touch the medullary bone to stimulate bone turnover, resulting in an facilitated orthodontic treatment. It is characterized by a three to four-fold decrease in time in an orthodontic treatment, in addition to decreasing root resorption and obtaining greater stability compared to conventional orthodontic treatment. Although corticotomy procedures are quite effective in helping to accelerate orthodontic tooth movement, they are intrinsically invasive due to the need for significant flap elevations, which can result in post-surgical discomfort and complications that prevent patients from undergoing such procedures. Some studies have also reported that procedures that involve full-thickness flap elevation can cause periodontal problems and increase dental mobility and bone dehiscence.

Another procedure, minimally invasive; “The Piezocision TM technique” was introduced in 2009. This flapless technique used an ultrasonic piezo-surgical knife to perform microincisions in the gum and cortical alveolar bone. In the surgical technique, vertical microincisions are made with a microblade of scalpel or a scalpel blade number 15 in the vestibular interradicular spaces from the base of the papilla and finally transmucosal corticotomies are made through the incisions previously made, at a depth of 2 to 3 mm. No suturing is necessary, unless tunnels are made for bone graft placement. Orthodontic forces are applied every 14 days. The advantages of this technique is to be minimally traumatic, so pain, inflammation and post-surgical ecchymosis are rare, since no flap of total thickness is lifted and the surgical time is short, this technique reduces damage to osteocytes and allows the survival of bone cells. Of the most important advantages is that the use of piezoelectric scalpel, due to its microvibration, allows selective cutting in mineralized structures without damaging soft tissues. It has as disadvantages that it allows poor visibility; The piezoelectric scalpel and the difficulty in controlling bone grafting are necessarily required.

INDICATIONS AND CLINICAL APPLICATIONS

1. Perform molar intrusion and extrusion movements or closing an open bite.
2. Potentialize the correction of severe to moderate grade malocclusions.
3. Perform more extensive movements in a very short time compared to conventional orthodontic treatment.
4. Solve the crowding and shorten the treatment time.
5. Accelerate canine retraction after premolar extraction.

Distal canine movement is a time-consuming procedure for patients with premolar extraction. Conventional
CONCLUSIONS
Corticotomy and piezocision had no adverse impact on the periodontal state, including plaque index, depth of probing, insertion levels, gingival recession, degrees of mobility and alveolar crest levels.

Piezocision however seems to be a less traumatic technique with greater patient acceptance. More Studies (ECA) are required to confirm your acceleration rate, risk-benefit ratio, long-term follow-up.

REFERENCES