

# Dental and Oral Health

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## The use of piezoelectric surgery in oral and maxillofacial surgery

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Piezoelectric surgery device or ultrasonic surgery device was originally developed for the atraumatic cutting of bone by way of ultrasonic vibrations and as an alternative to the mechanical and electrical instruments that are used in conventional oral surgery. Even though piezoelectric bone surgery is a relatively new alternative for bone-related procedures in oral and maxillofacial surgery, over the past two decades, increasing amount of literature has shown the application of piezosurgery within dental surgery, implantology and maxillofacial surgery. Recent publications have also shown the benefits of their use in craniofacial surgery, plastic and reconstructive surgery, head and neck surgery, neurosurgery, ophthalmology, traumatology, and orthopaedics. Key features of piezosurgery include the selective cutting of bone without damaging the adjacent soft tissue (e.g. vessels, nerves or mucosa), providing a clear visibility in the operating field by the way of pressurized irrigation and cavitation phenomenon, as well as cutting with micron sensitivity without the generation of heat. According the literature large initial costs of this innovative tool could be considered one of the disadvantages. The other main disadvantage would be the increased operation times when compared with conventional techniques in Oral and Maxillofacial procedures. The author of this presentation describe the current status of the application of piezosurgery within oral and maxillofacial surgery facilitated by the use of clinical case examples and argue that piezosurgery should take a place in the surgical armamentarium of a surgeon that deals with bone procedures.

### Biography

Berkay Tolga Suer has completed his Graduate degree from Aegean University and PhD degree from Gulhane Military Medical Academy (GATA) at Ankara. He is a Clinical Associate Professor of the Oral and Maxillofacial Surgery Department at GATA Haydarpasa Teaching Hospital in Istanbul. He has published more than 30 papers in reputed journals.

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