Dr. Kazak graduated from the Istanbul University Faculty of Dentistry in 1987. In 1988 he co-founded the Medicadent Dental Clinic, where he works as administrator and clinical director, as well as practices in specialized fields of dentistry. In 2007 he completed the RWTH Aachen University Master's program "Lasers in Dentistry". He is actively involved in pioneering laser dentistry in Turkey.

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Cavity Preparation in Permanent Teeth

Zafer Kazak

Parameters:

	Enamel Removal	Carries Removal	Etching
Laser source	Er:YAG (2940 nm)	Er:YAG (2940 nm)	Er:YAG (2940 nm)
Mode	MSP	SP	MSP
Power / Energy	150 mJ	200 mJ	120 mJ
Frequency	15 Hz	15 Hz	10 Hz
Handpiece	R02	R02	R02
Water/Air Spray Setting	5/4	5/4	5/4

Treatment procedure:

Cavity preparation with lasers reduces pain and provides comfort during treatments by reducing noise and vibrations, when compared to rotary instruments, and they cut more precisely without removing healthy tooth tissue. The use of Er:YAG lasers for cavity preparation is also considered safe as it causes minimal thermal side-effects when compared to other lasers. Because of these reasons we prefer using Er:YAG lasers, especially for deep carries removal. Besides cavity preparation, lasers can also be used with conventional acid etching procedures, and when used together, acid and laser etching provides a stronger bond between the resin and the tooth when compared to acid etching alone.

A systemically healthy male patient was referred to our clinic with cavities and sensitivity in the mandibular premolar and molar teeth. Without local anesthesia, the decayed part of the tooth was removed with the tip-less Er:YAG handpiece. Cavity preparations and surface etchings prior to acid etching were done with slightly modified parameters. The procedure took 35 minutes and was very comfortable for the patient. The teeth were restored with composite resins.

Before treatment

During treatment

After Treatment