

Approach to Electrical Anesthesia: Nine Years of Experience in Odontostomatological Surgery

From 1980 to 1989, we used electrical impulses combined with diazepam for 1,061 dental and oral surgical procedures. The purpose of our effort was to perfect the use of electrical impulses combined with suitable medication to reach an analgesic-sedative state sufficient to allow surgical operations. We discovered that by using the effects of high-frequency (60 to 335 kHz) bipolar impulses conveyed by low-frequency (250 to 330 Hz) trains, with or without anesthesia, we were able to achieve deep analgesia and sedation and proceed with treatment. Procedures performed included extractions, devitalizations, prosthetic preparations, third molar surgery, and enucleation of tooth buds.

The technique we developed is as follows. Electrodes were applied to the forehead (cathode) and retromastoid areas (anodes). Electrical anesthesia is then provided by an SEA 2000 stimulator (Asco Italia, Milan, Italy). Venipuncture was followed by administration of diazepam, fentanyl, and atropine. Once surgery commenced, with patient reactions to the stimulus serving as a guide to increasing electrical current, modifying the waveform, adjusting the frequency of stimulation, or injecting more sedative agents. We also used electrical stimulation in patients anesthetized with diazepam, nitrous oxide and oxygen, and nondepolarizing muscle relaxants.

Advantages to the addition of electrical anesthesia include elimination of general anesthetic agents, economic advantages, complete neurovegetative system stability, and better postoperative recovery. Patients noted the quicker and smoother recovery of the technique and the

absence of unpleasant halitosis. The attached references provide a historical basis for our technique.

M. Varrese and G. Guerrini
University of Padua, Treviso, Italy

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