



Anesthesia Tech Day crghs.com editorial staff for Tooth for All

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Anesthesia Tech Day is celebrated on March 31 every year. The day honors technologists and technicians for their contributions toward anesthesiology and healthcare. Anesthesiologists are integral members of the global medical field, and their efforts are unparalleled. It's a day of education for aspiring medical and healthcare professionals, a celebration of scientific breakthroughs, and fundraising for future research.

Learn more about the history of anesthesia, including the discoveries that made surgical treatment more comfortable for patients. The origin of anesthesia dates back to ancient times when Babylons, Greeks, and Chinese used natural herbs to be taken orally. Later in the 1200s, Italian physician and bishop Theodoric of Lucca used sponges soaked in mandrake plant extract and opium to relieve surgical pain. The breakthrough of actual medical anesthesia that we know today didn't come immediately. Throughout the centuries, patients who underwent surgery had to tolerate the pain or rely on opium, alcohol, or even a bullet to bite to relieve the agony. When the Civil War came, and soldiers had to undergo surgeries and amputations regularly, it was clear that developing more advanced anesthesia had to be a priority for medical professionals.

The first surgical procedure that used anesthesia was in 1846. Dentist William T.G. Morton of Boston Massachusetts used sulfuric ether to anesthetize a patient for a vascular tumor removal surgery. Morton called this discovery 'Letheon' after the Lethe River of Greek mythology which was described as a powerful river that helps remove painful memories. He gained financial success after this discovery.

The vast evolution took place in attempts to improve the performance of anesthesia in the medical field. This includes the discovery of laughing gas in 1844 and the successful use of cocaine as a spinal anesthetic in 1898. In 1902, Dr. Mathias J. Seifert of Chicago patented the terms 'anesthesiology' and 'anesthesiology'.

Today, modern anesthesia is a standard tool for medicine and surgeries and tailored according to a patient's needs especially in UAE. From dentistry, and cosmetics, to general medicine, anesthesia has come a long way. Anesthesia in dental treatments is the field of dentistry that manages pain and anxiety by using local anesthesia, sedation, and general anesthesia. Different medications are administered so that the patient has a relaxed and comfortable experience. The physician, after discussing with the patient, takes into consideration several factors when choosing certain medications for the treatment. The type of operation, the patient's general health, the history of allergies, and the anxiety level are all taken into consideration when deciding which anesthesia method is most suitable for the patient's individual case.

Local anesthesia in dental treatments.

Local anesthesia in dental treatments consists of numbing a minor area by injecting a local anesthetic under the skin in the spot where the incision will be made. If utilized alone, this type of anesthesia presents the least possible risks. There are various local anesthetics that have different levels of absorption, toxicity, and duration of action. One of the most utilized local anesthetics is Lidocaine (Xylocaine). It can be injected or placed topically on the mucous membranes. A topical anesthetic that is becoming more popular for being used before painful dental treatments is the eutectic mixture of local anesthetics (EMLA) cream. This type of cream is made of lidocaine and prilocaine. It is applied directly on the skin and it takes about one hour to gain a satisfactory numbing effect. It can also be used before giving injections or pulling superficial splinters.

Types of local anesthesia.

Local anesthesia is used in dental medicine for over a century and it is still the main type of procedure when applying anesthetics. Several types of local anesthesia are applied in a variety of areas in the mouth, according to the dental problem and its gravity:

- nerve block – it anesthetizes the nerves inside the mouth and it is used for invasive dental problems;
- infiltration – the anesthetic is applied at the root of the tooth;
- intraosseous – it is applied only using an injection into the bone; the method it used for complicated medical interventions, such as dental surgery;
- intrapulpal – it is administered into the pulp of the tooth.

The duration of the anesthetic depends on the medical problem of the patient and the area where it was applied. This can be short, intermediate, or long (it can last from 5/10 minutes to more than 300 minutes) and, for each of these stages, our dentists use different types of anesthetics.

At this moment, there are two ways of applying local anesthetics:

- injectable anesthetics – applied using a dental syringe;
- topical anesthetics – this method is used for reducing stress or discomfort which is usually associated with injections. It is an alternative method for certain interventions, as it anesthetizes only the mucous membrane and tissue. It can't be used for dental interventions done on teeth or jawbone.

When is general anesthesia used?

There are cases where phobic patients need general anesthesia. Even though it is not that often used, due to its risks which need to be attentively considered, general anesthesia can be a good option for anxious patients when other treatments cannot be proposed and used. General anesthesia means that a patient is totally unconscious, and the dentist can suitably perform dental treatments. It is good to know that before such an important type of anesthesia, a specialist will analyze the health of the patient and the medical records. General anesthesia can be used in cases where several wisdom teeth are entirely covered in bone and can only be removed surgically. Many persons are afraid of not waking up after general anesthesia, but things are quite encouraging because the risk of complications is very small.

Dental sedation.

Dental sedation is a dental treatment anesthesia method which can be utilized by dentist in order to eliminate excitement or anxiety so that the patient receives the adequate dental treatment. There are different levels of dental sedation, as listed below:

- minimal sedation: the patient replies normally to verbal commands. Cognitive and coordination functions could be affected, however, breathing is not.
- moderate sedation (conscious sedation): the patient replies to oral commands, alone or with the assistance of light stimulation. There is no need for interventions to sustain breathing.
- deep sedation: the patient is not able to respond easily, however he or she can feel painful treatments. The breathing function could be impaired. The subject could necessitate assistance in keeping an open airway.
- general anesthesia: the patient cannot be awakened even by painful procedures. The breathing function could be often impaired. The patient often needs help to keep an unobstructed airway.

Concerns for dental anesthesia

Before any dental procedure is made, our specialists will have to ask a set of questions regarding your overall health, whether you are dealing with allergies or reactions to particular medicines. Also, if you are on medication, or if you take drugs for a specific illness, it is best to talk to your doctor. Even though there aren't many chances to have an allergic reaction to anesthetics, it is vital to talk to your dentist and offer complete information about your general health.

Are there any side effects?

Side effects for local anesthetics are extremely rare and local anesthesia is the commonest anesthesia technique used by our dentists. A haematoma might be seen as a potential side effect if the needle hits a blood vessel accidentally. There are also cases in which the eyes cannot blink properly. This might take a few hours, and usually, there are no additional problems in this direction. As another rare side effect, a patient might sense a fast beating heart for a few minutes after the local anesthesia has been performed. This is extremely rare, but if you sense it, it is best to talk to your dentist at that particular moment.

Leaving the dental office after an anesthesia.

If you are concerned about how you will feel when the dental treatment is performed, and if the anesthesia will last long, you should ask your dentist before any procedure is made. In most cases, the local anesthesia will last approximately 3 to 5 hours, a time during which the patient cannot speak or eat properly. Rest and plenty of water, plus light soups are suggested in these hours. Also, you might want to talk to a friend or a family member if you feel like you cannot deal on your own at a certain point.

Our specialist dentists are appropriately trained to utilize these methods for the management of dental patients and are devoted to conferring their safe and effective utilization.