

Wide-Awake Hand Surgery

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A recent advance in the operative care of patients undergoing hand surgery is the use of wide-awake local anesthesia. The popularity and efficacy can best be attributed to Dr. Donald Lalonde, a Canadian hand surgeon, who has reported on over 1400 hand surgery cases performed with wide-awake anesthesia. The local anesthetic is administered 30 to 45 minutes before the surgery, which allows the anesthetic to take the best effect. By giving the medication time to work, the procedure can be comfortably performed with the patient being wide awake. Avoiding intravenous medications minimizes postoperative nausea, vomiting, sore throat, shivering, possible damage to teeth or eyes, postoperative confusion, and some of the rare complications from intravenous sedation. Furthermore, patients on anticoagulants or blood thinners such as Coumadin, Plavix, or aspirin can maintain and continue their anticoagulant medication up to, and through surgery. Fragile diabetic patients, who worry about changes in their blood glucose levels and insulin, can actually eat and drink the morning of surgery.

The local anesthetic is a combination of epinephrine and lidocaine, the latter of which has been used for years in all aspects of medicine. Historically, there was a belief that epinephrine should not be used in hand surgery. This myth has been scientifically disproven, and studies demonstrate that epinephrine can be safely used in the hand and digits.

Epinephrine diminishes bleeding and potentiates the effect of the lidocaine allowing the medication to last longer. Consequently, anticoagulated patients benefit since epinephrine helps control bleeding by causing vasoconstriction. By buffering lidocaine with a solution called sodium bicarbonate, the discomfort from the injectate is lessened significantly; it is believed that much of the pain from a lidocaine injection is based on its low pH value. By adding bicarbonate, the pH is neutralized making the administration of the anesthetic more comfortable.

The risks during surgery are lessened when the procedure is done under a local anesthetic, without intravenous sedation. This minimizes the extent of necessary preoperative evaluations and testing making it more convenient and less costly. Elderly patients or those with multiple medical problems are potentially at risk with sedating medications and/or general anesthesia.

Procedures I typically perform with a wide-awake anesthesia technique are carpal tunnel surgery, trigger finger release, flexor and extensor tendon repair, de Quervain's



tenosynovectomy and mucous cyst and ganglion excisions.

A review from the United Kingdom reported 99% of patients experienced a high satisfaction rate. By injecting the anesthetic medications slowly, most patients in general tolerate it well. Wide- awake anesthesia is not appropriate for everyone, nor is it applicable for every surgical procedure. It is an advance in surgical technique that is a new option available to our patients.

Finally, with larger deductibles and copayments, the cost can be significantly less, patients to not require complex medical clearance and testing, they spend significantly less time in the recovery room and usually go home immediately after surgery.

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