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Liposomal bupivacaine: A novel, long acting local anaesthetic

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Post-operative pain control continues to be a problem in surgical patients. A novel formulation of an ultra-long acting local anesthetic is now available in the US: Exparel or liposomal bupivacaine. Liposomal bupivacaine is made up of microscopic polyhedral particles. The liposomes encapsulate the drug, bupivacaine hydrochloride, without altering molecular structure. This provides the reliable low dose release of the bupivacaine over time, providing long-lasting, post-surgical pain relief over the course of 2-3 days. This eliminates the need for titration of a single dose or the need for external devices or pumps to prolong analgesia. Plasma bupivacaine levels may persist for 96 hours after injection. Peak plasma concentrations are lower in magnitude and occur later in time than after a similar injection with bupivacaine HCl. Plasma bupivacaine concentrations are not correlated with local efficacy. Safety profile was evaluated in 10 clinical trials in patients undergoing a variety of surgical profile. There was no cardiac toxicity and no QTc prolongation, even a supra-therapeutic doses. Rate of absorption is dependent on total dose administered, route of administration and vascularity of the surgical site. Efficacy has been established. Multiple trials demonstrated a significant reduction if pain intensity scores and a reduction if overall opioid consumption compared to placebo. Liposomal bupivacaine is a safe and effective novel drug to treat post-surgical pain.

Biography

Christopher F Tirotta received his BA from Cornell University (USA) in 1982 and his MD from New York University School of Medicine (USA) in 1986. He also received an MBA Degree from Columbia University (USA) in 1999. He completed his internship in Internal Medicine at State University of New York, Stony Brook in 1987. He completed his residency training in Anaesthesiology at the University of Miami/Jackson Memorial Hospital in 1990; he sub-specialized in pediatric and cardiovascular anesthesia, including heart transplantation has been an active member of Nicklaus Children's Hospital medical staff since 1991, practicing in the Department of Anaesthesiology; he has served as the Director of Cardiac Anesthesia since 2002. He also has a clinical appointment with the Department of Anaesthesiology at the University of Miami Leonard M Miller School of Medicine, USA.

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