

# 3<sup>rd</sup> International Conference on Surgery and Anesthesia

November 17-19, 2014 Chicago, USA

## Pain management for surgery and anesthesia

Femi Ehizokhale Osho  
All Saint Medical University, USA

Acute pain is “the normal, predicted physiologic response to an adverse chemical, thermal or mechanical stimulus associated with surgery, trauma or acute illness. Acute pain results from activation of the pain receptors (nociceptors) at the site of tissue damage. This type of pain generally accompanies surgery, traumatic injury, tissue damage and inflammatory processes. Acute pain plays the vital role of providing a warning signal that something is wrong and in need of further examination. Acute pain is typically self-limited and resolves over days two weeks, but it can persist for 3 months or longer as healing occurs. Acute pain can activate the sympathetic branch of the autonomic nervous system and produce such responses as hypertension, tachycardia, diaphoresis, shallow respiration, restlessness, facial grimacing, guarding behavior and pallor and pupil dilation. Although pain in response to tissue damage is a normal phenomenon, it may be associated with significant, unnecessary physical, psychological and emotional distress. Inadequate relief of acute pain can contribute to hypercoagulability and impaired immunity, leading to such complications as venous thromboembolic disease and infections. Inadequately controlled acute pain can be a factor in the development of chronic pain, extended hospital stay, read mission and patient dissatisfaction. Pain is often classified by its pathophysiology into 2 major types: Nociceptive and neuropathic. Nociceptive pain involves the normal neural processing of pain that occurs when free nerve endings are activated by tissue damage or inflammation. Neuropathic pain involves the abnormal processing of stimuli from the peripheral or central nervous systems and is thought to serve no useful purpose. Nociception involves the 4 processes of transduction, transmission, perception and modulation. These processes are highly complex, but a simple summary can aid understanding of pain mechanisms and pain interventions. Accurate assessment of acute pain is essential for the development of an effective pain management plan. A comprehensive pain assessment includes pain location and quality, aggravating and alleviating factors, timing and duration, pain relief, functional goals and intensity. Several important principles guide the successful management of acute pain. Chief among these is the need to prevent pain whenever possible by administering analgesics before pain occurs. Another is to try to achieve a level of comfort that allows the patient to function adequately. For example, in postoperative patients, functional goals may be deep breathing, ambulating and being able to participate in physical therapy. Pain relief can be achieved by pharmacologic and non-pharmacologic measures. Optimal pain relief seems to result from a multimodal approach, combining a variety of medications and possible non-pharmacologic measures. With multimodal analgesia, also known as “balanced analgesia,” the patient is given 2 or more analgesic agents and/or analgesic measures. Each agent acts by a different mechanism and at a different site in the nervous system. This method provides maximal pain relief while minimizing adverse effects of any single agent. The analgesic agents prescribed for a patient will depend on the cause and type of the patient’s pain and on the individual’s response to treatment. Pain medications can be divided into 3 categories; non-opioid analgesics, opioid analgesics and co analgesics (or adjuvant analgesics). To use pain medications correctly, it is important to find out whether the patient’s pain is constant or incidental. Constant pain is best treated with an “around the clock” (ATC)regiment; by giving the patient medications regularly, an adequate blood level of analgesic can be maintained. It is best to prevent incidental pain whenever possible by giving an analgesic before pain develops. For example, administration of pain medication 30-60 minutes before physical therapy will help to minimize therapy-associated pain and maximize the patient’s participation. Pain that increases above the patient’s controlled baseline level of pain is referred to as “breakthrough pain”. Incidental pain can occur as the patient’s only pain, or it can occur as a breakthrough pain. Patients receiving ATC analgesics for continuous pain and patients with pain that occurs incidentally are provided with short-acting, “as-needed” (PRN) analgesics.

### Biography

Femi Ehizokhale Osho has completed his first Bachelor degree from Olabisi Onabajo University, Ago-Iwoye, Ogun State where he studied Biochemistry. He also has a degree from European American University, Dominica, where he read Health Information management. He is presently Studying Medicine and Surgery at All Saint University School of Medicine situated in Saint Vincent and the Grenadines (Caribbean Island). He is currently in Semester 7 (3<sup>rd</sup> Year) and doing his clinical rotations program.

[femo2k3@yahoo.com](mailto:femo2k3@yahoo.com)