

Brief Communication

The use of non-steroidal anti-inflammatory drugs in the acute pain service

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The concept of a multimodal approach and an acute pain service (APS) to treat postoperative pain became widely popular at the end of the last century. Non-steroidal anti-inflammatory drugs (NSAIDs) are considered an integral part of a multimodal approach to provide post-operative analgesia. They reduce the opioid requirement by 20-30%.¹ We performed an audit to look at the frequency of NSAIDs prescribed by the APS at Riyadh Armed Forces Hospital from 1994 to 2003. In this hospital, the APS is limited to post-operative obstetric and gynecology patients. It offers 2 post-operative analgesic modalities: 1. Intravenous morphine patient controlled anesthesia (PCA) and, 2. Epidural analgesia with an infusion mixture of fentanyl and bupivacaine. The APS has served over 10,000 patients during this period. Most patients (84%) received APS after cesarean section; one-third received epidural and two-thirds received PCA. As part of a multimodal approach to provide post-operative analgesia, NSAIDs were also used. Overall, one-third of patients with APS (38% of epidurals, and 33% of PCAs) received a diclofenac suppository. The opioid sparing effect of NSAIDs is well known, but the presence of contra-indications excludes their use in a number of patients. In practice, side effects of NSAIDs do not pose much of a problem if these drugs are used for a short period according to the Royal College of Anaesthetists dosage guidelines.² However, there may be other reasons that NSAIDs were not used in the majority (65%) of our patients. For example, some anesthetists may be unaware of a multimodal approach and ignore their use. Also, a number of anesthetists add NSAIDs in procedures considered more painful. In one study, NSAIDs with epidural analgesia were used more frequently (35%) after thoracic and upper abdominal operations than following vascular operations (11%).³ In addition, there may have been patients who did not have absolute contra-indications to NSAIDs, but who had certain conditions that worried the anesthetist; such as undesirable effects on the uterus, kidney, and platelets. Prostaglandins contract the uterus and are essential for normal renal and gastric function.⁴ The NSAIDs, being anti-prostaglandins, may interfere with post-partum uterine contractility and anesthetists may have avoided them in patients with uterine atony. The nephrotoxic effect of NSAIDs can be potentiated in conditions where perfusion of kidneys is subnormal, such as in moderate/severe pre-eclampsia or after massive blood loss. When the

number or the function of platelets is low, such as after hemorrhage or severe pre-eclampsia, NSAIDs can cause a coagulation problem. Anesthetists may also be reluctant to use NSAIDs in the presence of a history of dyspepsia, which is a common symptom during pregnancy. Patients who have received a large amount of Syntocinon are at risk of water retention and pulmonary edema. In these cases, NSAIDs may aggravate the condition because of their sodium and water retention effect. In addition, NSAIDs are excreted in breast milk and their harmful effect on the newborn may be of concern to the anesthetist.

We recommend that non-opioid (antipyretic) analgesics should be routinely used for moderate to severe post-operative pain as an adjunct to the main analgesic modality. There is sufficient evidence to recommend that an NSAID be added to acetaminophen for short-term post-operative pain relief.^{5,6} The additional analgesic effects of acetaminophen and diclofenac reduce morphine consumption with PCA more than when either agent is used alone.⁷ When routine use of NSAIDs is prohibited due to contraindications, acetaminophen should be used regularly and not on an as required basis.

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