Multimodal Pain Management in Patients Undergoing Bariatric Surgery

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Introduction
Effective acute post-operative pain management has become of paramount importance in healthcare today, a major challenge and critical component of post surgical care. Opioids have been the mainstay for the management of post-operative pain for the patients undergoing bariatric surgery. Use of opioids, although highly effective, may cause respiratory depression, post-op atelectasis, post-op nausea and vomiting and increased hospital stay due to these adverse reactions.

Method and Results
This is a retrospective chart review of adult patients who have undergone laparoscopic sleeve gastrectomy surgery at Bayshore Community Hospital. Retrospective data was collected from patient electronic records from April 2014 to April 2015. Sample size needed to achieve a power of 80 with moderate effect size using alpha coefficient of 0.05 was 130, 65 in each group. Data was analyzed using independent samples t-tests to determine the differences in the mean amount of opioids consumed, patient report of pain level, level of consciousness (LOC) and oxygen saturation (O2 sat.).

One hundred thirty four records were included in the study, 65 in the group receiving opioids and IV acetaminophen and 69 in the group receiving opioids, IV acetaminophen and NSAIDs. There was a statistically significant difference between the 2 groups for opioids consumed between 12 and 24 hrs. post-surgery (p-value=0.032); the mean was higher for the opioids & IV acetaminophen group (mean diff= 4.3 units.) There was a statistically significant difference in the oxygen saturation between 12 at 24hrs (p-value= 0.041) post surgery. The O2 Sat was higher in the group receiving opioids in combination with IV acetaminophen and NSAIDS (mean diff=0.68). No statistically significant results were noted in LOC or pain.

Conclusions
The difference in the amount of opioids consumed between 12 and 24 hours post-surgery indicated that the addition of NSAIDS to the pain management regimen resulted in this group receiving 4 mg less opioids. The mean difference in O2 saturation between the two groups was not considered clinically significant (96.01 vs. 96.69). Therefore there were no meaningful differences between the 2 groups on all outcomes measured.

Implications
Further research is needed to investigate the type and amounts of specific opioids (Dilaudid and Morphine) consumed. This distinction was not made in the current study.

We have chosen this study for our research as it is of significant concern to us as nurses. This research sparks a hope to ensure other patients may benefit from this study in the future. It is also an ultimate motivation that through continuous and persistent research, we may be able to eventually provide effective and safe pain management to our patients, a contribution to optimum patient care and patient satisfaction.