

What's New in the Patient Safety World

December 2023

Postop Gabapentin No Better Than Placebo

Over the past couple decades, gabapentin and gabapentinoids have been widely used in management of pain. At the beginning, they were used primarily for neuropathic pain. But now they've been used for almost any sort of pain. Recently, there has been a trend toward using gabapentinoids postoperatively in hopes that use of opioids might be reduced. Because of this, a randomized controlled clinical trial was designed to address this question. The [GAP trial](#) randomly allocated patients undergoing cardiac, other thoracic, and abdominal surgery into one of two groups. Those in the first group were treated with gabapentin one hour before surgery and for two days after surgery. Those in the second group were treated with an identical looking dummy pill (placebo) at the same timepoints. Pain levels were assessed by asking patients one, four and 12 hours after surgery and then twice a day until they were discharged from hospital. Patients were also followed up until discharge to find out if they have taken opioid pain killers, as well as to assess their quality of life after four weeks and four months.

Results of the GAP trial were recently presented at an abstract session at the American Society of Anesthesiologists annual meeting ([Gever 2023](#)). No clinically significant benefit was seen for the active drug in terms of length of hospital stay, opioid use, patient-reported acute pain, or quality of life. Trends toward less severe pain, when assessed 4 months after surgery, and better quality of life were seen in the placebo group.

GAP randomized 1,196 patients 1:1 to receive gabapentin or placebo for 3 days, starting immediately before surgery. The first gabapentin dose was 600 mg, then it was given at 300 mg twice daily on days 1 and 2 after surgery. Median patient age was about 68, and roughly two-thirds were men. Median length of stay, the primary outcome, was 5.94 days in the gabapentin group versus 6.15 days in the placebo group ($p=0.26$). That minor difference was the same with all three surgery types.

Opioid use did favor gabapentin for non-cardiac thoracic and abdominal procedures over the first few post-operative days, being roughly 30% lower at several time points. But it was felt that this was statistically significant but not clinically significant. Similar differences were seen with patient-reported acute pain, but these were not felt to be clinically important, representing less than one point on the standard 10-point scale.

Longer-term evaluations of chronic pain and quality of life, which trended against gabapentin, also indicated that the differences were relatively small in clinical terms.

Adverse event rates did not differ at all, recorded for about one-third of patients in both treatment groups. That is somewhat surprising. Over the past 5 years, we've seen more and more examples of the downside of gabapentinoids (see our prior columns listed below). There were several reports of increased risk of respiratory depression when gabapentinoids were used in conjunction with opioids.

Researchers acknowledged study limitations such as restriction to major body-cavity surgeries, meaning that the study is not relevant to joint replacements (when painkillers are often required for much longer than 2 days) or any kind of ambulatory procedure, and the inflexible dosing protocol.

Some of our prior columns on safety issues with gabapentinoids:

- November 2017 [“Bad Combination: Gabapentin and Opioids”](#)
- March 2019 [“Gabapentin and Pregabalin on the Radar Screen”](#)
- January 2020 [“FDA Warning on Gabapentinoids”](#)
- February 25, 2020 [“More on Perioperative Gabapentinoids”](#)
- January 2021 [“Gabapentinoids Again”](#)
- June 2022 [“Gabapentin and Overdoses”](#)
- September 27, 2022 [“More Bad News for Gabapentin”](#)

References:

Gever J. Gabapentin as Post-Op Painkiller Gets a Cold Shower — Placebo-controlled trial offers no justification for widespread use. MedPage Today 2023; October 15, 2023
<https://www.medpagetoday.com/meetingcoverage/asa/106814>

Gabapentin in post-surgery pain
<https://www.isrctn.com/ISRCTN63614165>

<http://www.patientsafetysolutions.com/>

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