Reduced Incidence of Postoperative Vomiting with Oliceridine than with Morphine at Equianalgesic Conditions

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ABSTRACT

Oliceridine, a next-generation IV opioid, is a G-protein selective MOR agonist, may improve gastrointestinal tolerability compared to morphine, and provides an important new option for clinical management of postoperative pain. Future prospective studies are needed to confirm these findings.

BACKGROUND

Postoperative nausea and vomiting (PONV) is a frequent complication following surgery with a reported 30% incidence among all post-surgical patients and up to 80% among high-risk patients, and use of conventional opioids increases the risk.

Although postoperative vomiting often accompanies nausea, they are distinct, physiologic phenomena, where nausea is a subjective unpleasant sensation and vomiting is a forcible expulsion of stomach contents.

Postoperative nausea alone poses limited health risks; while postoperative vomiting can potentially result in significant complications following surgery, with a reported 30% incidence among all post-surgical patients and up to 80% among high-risk patients, and use of conventional opioids increases the risk.

In two randomized, double-blind, placebo- and morphine-controlled trials, a statistically significantly higher proportion of patients in the placebo regimen (16.4%) and patients in two of the oliceridine treatment regimens, 0.1 mg: 68.0% and 0.35 mg: 68.0%, achieved Complete GI Response compared to morphine (30.8%, p < 0.001 vs. morphine).

CONCLUSIONS

Findings from this exploratory analysis show that Complete GI Response (defined as no postoperative vomiting and no use of rescue antiemetics) was significantly higher with the lower doses of oliceridine than morphine.

When controlled for the analgesic effects (at constant SPID 48/24) the odds ratio for Complete GI Response was higher with oliceridine than morphine.

Oliceridine, a G-protein selective MOR agonist, may have improved gastrointestinal tolerability compared to morphine, and provides an important new option for the clinical management of postoperative pain. Future prospective studies are needed to confirm these findings.

OBJECTIVES

• To characterize the GI adverse event profile of oliceridine vs morphine from these studies

• We also evaluated the Complete GI Response endpoint under equianalgesic conditions, where nausea, as measured by Sum of Pan Intensity Difference (SPID), was held constant.

METHODS

The cost associated with the treatment of a vomiting episode is significantly higher (3X as high) than that associated with nausea alone."