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The Safety of Per Os Naloxone and its Efficacy in Resolving Postoperative Ileus in Patients Undergoing Spine Surgery

Eric Klomparens

Karam Asmaro
Henry Ford Health System, KASMARO2@hfhs.org

Jacob Pawloski
Henry Ford Health System, JPAWLOS1@hfhs.org

Hesham Mostafa Zakaria
Henry Ford Health System, hzakari1@hfhs.org

Mathew Jones
Henry Ford Health System, MJONES18@hfhs.org

See next page for additional authors

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Authors
Eric Klomparens, Karam Asmaro, Jacob Pawloski, Hesham Mostafa Zakaria, Mathew Jones, Beverly C Walters, and Jason Schwalb
The Safety of Per Os Naloxone and its Efficacy in Resolving Postoperative Ileus in Patients Undergoing Spine Surgery

Eric Klomparens, BS, MS¹; Karam Asmaro, MD¹; Jacob Pawloski, BS¹; Hesham M. Zakaria, MD¹; Mathew Jones, PharmD²; Beverly C. Walters, MD, MSc, FRCSC¹; Jason M. Schwalb, MD¹

Departments of ¹Neurosurgery and ²Central Pharmacy, Henry Ford Health System, Detroit, Michigan, USA

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Background

- Postoperative GI dysfunction is common after spine surgery
  - Includes postoperative constipation, paralytic ileus
- GI dysfunction → longer hospital stay & increased cost
- The pathophysiology of postoperative GI dysfunction is multifactorial, but opioid analgesic therapy plays an important role
- Naloxone is a μ-opioid receptor antagonist which has limited systemic absorption after oral administration
Background

• PO naloxone has been used for treatment of opioid-induced GI dysfunction in chronic pain and cancer patients
• Other µ-opioid receptor antagonists are used in the management of postoperative GI dysfunction after intraperitoneal surgeries
• PO naloxone has not been studied in the setting of spine surgery patients
• Goal of the current study: To evaluate the safety and efficacy of PO naloxone in the management of postoperative constipation and ileus in spine surgery patients
Methods

• Retrospective, observational study of all spine surgery patients under the care of the neurosurgery team in HFH from January 2015 to December 2018 who received PO naloxone on the floor during their postoperative hospital stay for constipation or postoperative ileus.

• Chart review to gather information about patients, surgery, naloxone dosing, postoperative course and complications, and possible opioid withdrawal symptoms.

• Primary outcomes: time to first BM after PO naloxone administration, hospital length of stay.
Results

- 29 consecutive patients included
- All patients received concurrent laxative or other GI motility agents without resolution (most received 3 or more such agents)
- 48% were pre-operative opioid users
- 83% of surgeries were thoracolumbosacral
Results

• Efficacy:
  • 90% of patients (26/29) had a BM after PO naloxone administration
    • All patients had a bowel movement the same or following day (1 not recorded)

• Safety:
  • No signs of immediate opioid withdrawal were noted in any patient after PO naloxone administration
    • No significant increase in PRN opioid demands after PO naloxone (p=0.23)
    • No significant change in pain scores after PO naloxone (p=0.33)
    • No significant change in vital signs after PO naloxone (p=0.61)

• 1 patient had a cardiac arrest and death during GETA induction of a subsequent surgery
Limitations

• The observational nature of our study and lack of control group limit the ability to understand the effect attributable to PO naloxone.

• The use of many other GI agents concurrently further limits analysis.

• The modest sample size reduces the power to find significant correlations.
Conclusions

• PO naloxone may be an effective and safe method of reducing the length and burden of postoperative GI dysfunction in spine surgery patients.

• 97% of patients had return of bowel function and resolution of symptoms within one day.

• Further studies are necessary to more fully evaluate both the efficacy and safety of PO naloxone in the management of postoperative GI dysfunction.
References


Enterex (alvimopan) [prescribing information]. Whitehouse Station, NJ: Merck Sharp & Dohme Corp.; 2015.


