Double-blind, placebo-controlled, randomized trial of octreotide in malignant bowel obstruction

Reference: Currow, D.C, et al. May 2015.. *J Pain Symptom Manage* 49(5): 814-21

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Abstract

CONTEXT:

Does octreotide reduce vomiting in cancer-associated bowel obstruction?

OBJECTIVES:

To evaluate the net effect of adding octreotide or placebo to standardized therapies on the number of days free of vomiting for populations presenting with vomiting and inoperable bowel obstruction secondary to cancer or its treatment.

METHODS:

Twelve services enrolled people with advanced cancer presenting with vomiting secondary to bowel obstruction where surgery or anti-cancer therapies were not indicated immediately. In a double-blind study, participants were randomized to placebo or octreotide (600 μg/24 hours by infusion). Both arms received standardized supportive therapy (infusion of ranitidine [200 mg/24 hours], dexamethasone [8 mg/24 hours], and parenteral hydration [10-20 mL/kg/24 hours]). The primary outcome was patient-reported days free of vomiting at 72 hours.

RESULTS:

In a study that recruited to the numbers identified in its power calculation, 87 participants provided data at 72 hours (45, octreotide arm). Seventeen people (octreotide) and 14 (placebo) were free of vomiting for 72 hours (P = 0.67). Mean days free of vomiting were 1.87 (SD 1.10; octreotide) and 1.69 (SD 1.15; placebo; P = 0.47). An adjusted multivariate regression of the incidence of vomiting over the study showed a reduced number of episodes of vomiting in the octreotide group (incidence rate ratio = 0.40; 95% CI: 0.19-0.86; P = 0.019); however, people in the octreotide arm were 2.02 times more likely to be administered hyoscine butylbromide (P = 0.004), potentially reflecting increased colicky pain.

CONCLUSION:

Although there was no reduction in the number of days free of vomiting, the multivariate analysis suggests that further study of somatostatin analogues in this setting is warranted.

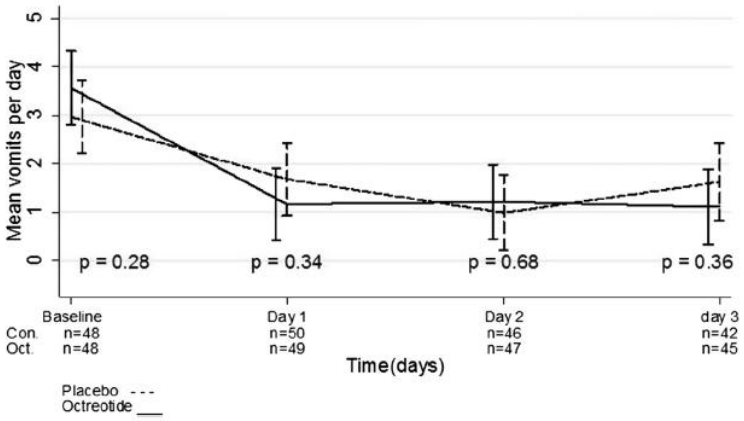

Fig. 3. Mean unadjusted number of vomiting episodes between baseline and Day 1. *P*-value for difference between groups and error bars are 95% CI.

Strengths

- Well-designed randomized control trial:
    - Appropriate central randomization, double blinded, treatment vs placebo group appropriately similar, intention to treat, low patient dropout rate
    - Attempted to control for confounding PRN treatments: standardized choices for pain (parenteral opioids), colicky pain (hyoscine), nausea (haloperidol)
- Largest trial of somatostatin analogues completed in a relevant palliative population (vomiting due to clinical MBO, where surgery/further anti-cancer therapies were not appropriate)

Weaknesses

- Primary outcome was number of days free of vomiting in the first 72 hours after octreotide initiation
- Fixed dose study: octreotide 600 µg/ 24 hours
- Overall role of concurrent treatment with dexamethasone/ranitidine?

Application to Palliative Care

- Applicable to our palliative population in the appropriate setting (12 palliative care service networks)

- Provides rigorously designed evidence to a relevant outcome that has had conflicting data
- Study findings have financial implications due to the high cost of octreotide