



Octreotide for long-lasting malignant bowel obstruction: two case reports

Sebastiano Mercadante^{1,2#}[^], Laura Tartaglia^{2#}

¹Main Regional Center for Pain Relief and Supportive/Palliative Care, La Maddalena Cancer Center, Palermo, Italy; ²Regional Home Palliative Care Program SAMOT, Palermo, Italy

Contributions: (I) Conception and design: S Mercadante; (II) Administrative support: None; (III) Provision of study materials or patients: L Tartaglia; (IV) Collection and assembly of data: Both authors; (V) Data analysis and interpretation: Both authors; (VI) Manuscript writing: Both authors; (VII) Final approval of manuscript: Both authors.

[#]These authors contributed equally to this work.

Correspondence to: Sebastiano Mercadante, MD. Main Regional Center for Pain Relief and Supportive/Palliative Care, La Maddalena Cancer Center, Via San Lorenzo 312, 90146 Palermo, Italy; Regional Home Palliative Care Program SAMOT, Palermo, Italy.

Email: terapiadeldolore@lamaddalenanet.it; 03sebelle@gmail.com.

Background: Efficacy of the combination of octreotide and other drugs for the management of malignant bowel obstruction (MBO) has been well described. However, long-lasting stages with lack of stool emission are a challenging clinical condition of MBO that have never described.

Case Description: We describe two cases in which the addition of octreotide to supportive care measures, even given late after more than 3 weeks of no stool emission, resulted to be still effective in recovering the bowel transit. In the first case, a patient admitted to home palliative care had a nasogastric tube and reported to not have stool emission and passing gas for 25 days. Two days after starting the combination of octreotide and other drugs, the patient evacuated and the nasogastric tube was removed, without reporting nausea or episodes of vomiting. In the second case, a patient admitted to an acute palliative care unit, the patient had no stool emission for more than 3 weeks. A nasogastric tube was placed and comprehensive palliative care treatment was provided. Two days after starting a combination of octreotide and other drugs, the nasogastric tube was removed, without reporting vomiting. In both cases, bowel transit recovered and patients were able to initiate oral nutrition.

Conclusions: The combination of octreotide with other drugs described for standard treatment for the management of MBO, should be attempted even in patients with very long periods of lack of feces emission.

Keywords: Malignant bowel obstruction (MBO); octreotide; advanced cancer; palliative care; case report

Submitted Mar 14, 2023. Accepted for publication Nov 30, 2023. Published online Jan 24, 2024.

doi: [10.21037/apm-23-311](https://doi.org/10.21037/apm-23-311)

View this article at: <https://dx.doi.org/10.21037/apm-23-311>

Introduction

Malignant bowel obstruction (MBO) is a serious complication frequently reported in patients with advanced cancer, particularly those with gynecological or colon malignancies (1). There is a typical cluster of symptoms associated with MBO, including nausea and vomiting,

abdominal pain, and colic. When MBO is inoperable, it requires a medical treatment with different drugs acting synergistically to maximize the clinical effect. In the last decade several recommendations have been provided, based on available evidence existing in literature (2-5). A more recent MASCC (Multinational Association of Supportive

[^] ORCID: [0000-0001-9859-6487](https://orcid.org/0000-0001-9859-6487).

Care in Cancer) guideline update reported that octreotide is effective in reducing gastrointestinal secretions and colic and thereby reducing nausea and vomiting caused by MBO (6). However, one of the most powered randomized placebo-controlled studies showed that octreotide was ineffective to significantly reduce vomiting during 72 hours of treatment. This paper, however, was biased by different shortcomings (7). An immediate effect in terms of gastrointestinal secretions is unlikely, as the occurrence of vomiting is a consequence of accumulating secretions. A progressive increased number of days free of vomiting was observed in the group receiving octreotide, particularly on the third day. The multivariate analysis showed that patients receiving octreotide experienced a lower number of episodes of vomiting compared with the placebo group. Thus, a longer assessment or just evaluating the data at the end of the treatment would have produced a different outcome (8). Of concern, diagnosis was made by a general practitioner. In addition, the use concomitant drugs could have flattened the gastrointestinal effects. Thus, the misleading conclusion of this study should not deter physicians from trying a safe and effective treatment extensively reported successfully for 30 years (9,10), and confirmed in some controlled studies (10). Finally, a pragmatic approach with individual interventions, particularly with the association of different drugs re-enforcing the effects on gastrointestinal secretions, should be taken into consideration. While the efficacy of the combination of octreotide and other drugs has been well described in the early stages, long-lasting stages with lack of stool emission is a challenging clinical condition of MBO. We describe two cases in which the addition of

octreotide was used to supportive care measures, even given late after more than weeks of no stool emission, it resulted to be still effective in recovering the bowel transit. We present both cases in accordance with the CARE reporting checklist (available at <https://apm.amegroups.com/article/view/10.21037/apm-23-311/rc>).

Case presentation

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the Helsinki Declaration (as revised in 2013). Written informed consent was obtained from the patients for publication of this case report. A copy of the written consent is available for review by the editorial office of this journal.

A man, in his seventies, with gastric cancer and peritoneal carcinomatosis, treated with FOLFOX from July to October 2022, was admitted to a general hospital for abdominal pain and irrepressible vomiting. During admission he was infected with coronavirus disease 2019. After some weeks, he was discharged home with a diagnosis of inoperable MBO confirmed by imaging studies, and was referred to a home palliative care service. At home, the patient had a nasogastric tube and reported to not have stool emission and passing gas for 25 days. He was re-hydrated and a treatment with scopolamine butylbromide (30 mg/day), metoclopramide (30 mg/day) and dexamethasone 8 mg/day was started. The day after, on request of the home care physician, octreotide was made available from the local health care authorities and administered in doses of 0.1 mg three times a day, in place of scopolamine. Two days after, facilitated by an enema, the patient evacuated and the nasogastric tube was removed, without reporting nausea or episodes of vomiting. He was able to drink and eat a semiliquid diet. One week later, octreotide was no longer available at home. In the subsequent days, the patient's condition worsened with increasing abdominal pain requiring low doses of subcutaneous morphine, but no episode of vomiting was recorded. The patient died the day after.

A woman in her sixties, with a perinatal paraplegia and colon cancer, was admitted to the acute palliative care unit of La Maddalena Cancer Center for episodes of vomiting dating back 4 months. Two years before she had undergone hemicolectomy and 1 year after she was reoperated for lysis of adhesions, mass resection with nephrectomy, and jejunectomy. At admission she revealed a lack of stool emission for more than 3 weeks and appeared strongly

Highlight box

Key findings

- The use of a combination of drugs, including octreotide may allow the recovery of the bowel transit even in cases of prolonged lack of stool emission in patients with inoperable bowel obstruction.

What is known and what is new

- There is no information regarding long-term obstipation and its treatment in patients with malignant bowel obstruction (MBO).
- For the first time, octreotide has been shown to be effective in the management of MBO in a state of long-lasting obstipation.

What are the implications and what should change now?

- Data from these two cases suggest that even prolonged states of bowel obstruction deserve an aggressive pharmacological treatment.

de-hydrated. She received oxycodone orally 60–80 mg/day, despite frequent episodes of vomiting.

Imaging studies showed a mass at ileo-colic anastomosis and a duodenal mass, responsible for gastrostasis, with air-fluid levels. Several peritoneal and abdominal muscular nodules were detected. A nasogastric tube was placed and forced hydration including plasma-expanders and parenteral nutrition, with correction of hypocalcemia and hyponatremia, were provided. She was switched to transdermal fentanyl 25 µg/h. Octreotide 0.3 mg/day, metoclopramide 30 mg/day, and dexamethasone 12 mg/day were prescribed. Two days after, no episode of vomiting was recorded. After measuring minimal amounts of gastrointestinal secretions in the bag, the nasogastric tube was removed and enteral nutrition with elementary diet was tolerated without inducing nausea and vomiting. Two days after the first bowel movement was observed. On the 7th day the patient was transferred to the adjacent hospice where she stayed for further 20 days. She was able to drink small amounts of liquid diet with nutritional supplements. Then she asked for being discharged home where she continued the treatment.

Discussion

Although prolonged states of lack of stool emission let us think about an irreversible condition of MBO, an attempt with a combination of drugs including octreotide to reverse this clinical picture was made. The aim was to recovery the bowel transit, reducing nausea and vomiting, removing the nasogastric tube, and allowing to drink and eat an elementary oral diet. Both patients with such a prolonged state of MBO were responsive to a comprehensive medical management, including octreotide, metoclopramide, and dexamethasone, as well as intensive measures such as forced hydration and correction of biochemical abnormalities, despite the unfavorable prognosis due to a prolonged state of lack of stool emission, which commonly produce proximal fecal impaction, inducing definitive and irreversible MBO. Although in previous studies octreotide resulted to be effective in recovering the intestinal transit (6-10), these peculiar aspects regarding the timing have never been reported in literature.

The design of a controlled study may provide the impression of no effectiveness of certain treatments (7). In a well powered randomized controlled study, many concerns biased the outcomes, including a diagnosis made by medical practitioners (who have limited experience), the eligibility of patients with nasogastric tubes only if they continued

to vomit (suggesting its misplacement), variable hydration practices between participating centers, the short time of assessment, or the use of hyoscine butylbromide for colicky pain, as needed. Indeed, multivariate analysis of vomiting showed that octreotide reduced vomiting. Octreotide was reported as drug of choice for medical management of MBO in recent recommendations (11).

In daily practice, a more pragmatic and dynamic approach may improve the performance of medical management of MBO, focusing on well recognized properties of multiple drugs acting with different mechanisms. The combination of agents with different specific mechanisms has a synergistic effect on gastrointestinal transit and secretions, also reducing intraluminal hypertension, which leads to the vicious circle of distension-secretion. The combination of propulsive and anti-secretive agents, including octreotide, acts synergistically to allow a recovery of bowel transit without inducing unpleasant colic, indicating that the most important mechanism of MBO in these circumstances is functional and can be reversible even in advanced cancer patients, if an aggressive treatment is initiated early before fecal impaction and edema render MBO irreversible. Recovery of intestinal transit may occur in about 90% of cases. Of interest, the suspension of the drug, due to unavailability, has been already reported to led to recurrence of the previous clinical condition, and the re-introduction again provided a clinical improvement (12). The cases reported in this paper, differently from standard series of patients with MBO, underline that even a late intervention with the addition of octreotide to the medical regimen may be effective and is worthwhile to be attempted.

Conclusions

Octreotide still remains a fundamental drug in the management of MBO. The combination of drugs should be attempted even in patients with very long periods of lack of feces emission. Supportive care should be warranted in patients who experience profound de-hydration due to previous undertreatment.

Acknowledgments

Funding: None.

Footnote

Reporting Checklist: The authors have completed the CARE

reporting checklist. Available at <https://apm.amegroups.com/article/view/10.21037/apm-23-311/rc>

Peer Review File: Available at <https://apm.amegroups.com/article/view/10.21037/apm-23-311/prf>

Conflicts of Interest: Both authors have completed the ICMJE uniform disclosure form (available at <https://apm.amegroups.com/article/view/10.21037/apm-23-311/coif>). S.M. serves as an unpaid editorial board member of *Annals of Palliative Medicine* from February 2022 to January 2024. The other author has no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee(s) and with the Helsinki Declaration (as revised in 2013). Written informed consent was obtained from the patient for the publication of this case report and accompanying images. A copy of the written consent is available for review by the editorial office of this journal.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

References

- Huang X, Xue J, Gao M, et al. Medical Management of Inoperable Malignant Bowel Obstruction. *Ann Pharmacother* 2021;55:1134-45.
- Bleicher J, Lambert LA. A Palliative Approach to Management of Peritoneal Carcinomatosis and Malignant Ascites. *Surg Oncol Clin N Am* 2021;30:475-90.
- Mercadante S, Casuccio A, Mangione S. Medical treatment for inoperable malignant bowel obstruction: a qualitative systematic review. *J Pain Symptom Manage* 2007;33:217-23.
- Davis MP, Hallerberg G, Palliative Medicine Study Group of the Multinational Association of Supportive Care in Cancer. A systematic review of the treatment of nausea and/or vomiting in cancer unrelated to chemotherapy or radiation. *J Pain Symptom Manage* 2010;39:756-67.
- Walsh D, Davis M, Ripamonti C, et al. 2016 Updated MASCC/ESMO consensus recommendations: Management of nausea and vomiting in advanced cancer. *Support Care Cancer* 2017;25:333-40.
- Currow DC, Quinn S, Agar M, et al. Double-blind, placebo-controlled, randomized trial of octreotide in malignant bowel obstruction. *J Pain Symptom Manage* 2015;49:814-21.
- Mercadante S. Author's Reply to Johnson and Noble. *J Pain Symptom Manage* 2015;50:e2.
- Walter M, Hansen E, Hamid S, et al. Palliative Management of Inoperable Malignant Bowel Obstruction: Prospective, Open Label, Phase 2 Study at an NCI Comprehensive Cancer Center. *J Pain Symptom Manage* 2023;S0885-3924(23)00686-3.
- Mercadante S, Porzio G. Octreotide for malignant bowel obstruction: twenty years after. *Crit Rev Oncol Hematol* 2012;83:388-92.
- Davis M, Hui D, Davies A, et al. Medical management of malignant bowel obstruction in patients with advanced cancer: 2021 MASCC guideline update. *Support Care Cancer* 2021;29:8089-96.
- Mercadante S, Ferrera P, Villari P, et al. Aggressive pharmacological treatment for reversing malignant bowel obstruction. *J Pain Symptom Manage* 2004;28:412-6.
- Mercadante S, Kargar J, Nicolosi G. Octreotide may prevent definitive intestinal obstruction. *J Pain Symptom Manage* 1997;13:352-5.

Cite this article as: Mercadante S, Tartaglia L. Octreotide for long-lasting malignant bowel obstruction: two case reports. *Ann Palliat Med* 2024;13(1):183-186. doi: 10.21037/apm-23-311