Malignant Bowel Obstruction: Proactive Nurse-Led Actions

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Abstract

Malignant bowel obstruction (MBO) is a significant problem affecting women with advanced gynecologic malignancies, specifically those with ovarian cancer (Letizia & Norton, 2003). Approximately 20-50% of women with advanced ovarian cancer will develop an episode of MBO at some point during their illness trajectory. Jayson et al., (2014) states that bowel obstructions are the most frequent single cause of death in patients with ovarian cancer. Many of these women are unaware that they are at risk or know the signs and symptoms of MBO. There is a lack of evidence based nursing protocols to guide nurses to manage the care of these patients. Oncology nurses can play a significant role in educating, assessing and managing this patient population and enhance their quality of life.

*Keywords:*

Patients with a gynecological malignancy and predominantly those with ovarian cancer, may experience malignant bowel obstruction (MBO) (Letizia & Norton, 2003). In Canada, one in 71 women is expected to develop ovarian cancer during her lifetime which amounts to about 2,800 women yearly (Canadian Cancer Society [CCS], 2016). The five-year relative survival for women diagnosed with ovarian cancer is 45% and one in 91 women will die from the disease (CCS, 2016). Although the prevalence of ovarian cancer is low compared to other types of cancers, more than 80% of patients are diagnosed at an advanced stage of disease (stages III and IV) due to the vague nature of presenting symptoms (Castro et al., 2017). These women are therefore at risk for developing complications of advanced disease, one of which is MBO.  
 MBO occurs when the small or large bowel is partially or completely blocked from cancer, post-surgical adhesions or scar tissue from radiation treatment (Letizia & Norton, 2003). The bowel lumen narrows, making it difficult for stool to pass through (Letizia & Norton, 2003). Women with MBO experience vomiting, abdominal pain, absence of stool or overflow diarrhea (Letizia & Norton, 2003), all of which require immediate medical intervention and often result in long hospital stays. The median survival of patients with MBO ranges from 121 to 169 days without palliative surgical intervention or 162 to184 days for those with a palliative surgical intervention (Martin-Lorente et al. 2015; Mooney et al., 2013; Sartori et al., 2009). Since MBO is usually a pre-terminal event, the focus of treatment is symptom relief, however clinical nursing management for patients with MBO is not well defined (Daniele et al., 2015; Krouse et al., 2002). As a result, patients who are at risk progress to developing a MBO and experience symptom distress due to lack of early identification and timely intervention (Daines et al., 2013).

Oncology nurses, by virtue of their specialized role (Canadian Association of Nurses in Oncology ([CANO]) are expected to assess patients, provide education and implement evidence based interventions. Currently, there are no clear guidelines or protocols for the nursing management of MBO (Daines et al., 2013). The establishment of proactive nursing management for patients with MBO can potentially improve patient outcomes in an ambulatory setting, may decrease emergency department visits, hospital admissions, and improve patient quality of life. In addition, these management strategies, once established, may be extended to patients with other cancers such as gastrointestinal malignancies, where MBO is also a significant problem (Krouse et al., 2002). Excellent rationale

**Research Problem**

Malignant bowel obstruction is a condition that adversely impacts the quality of life of women with gynecologic cancers and there is a lack of protocols to guide nurses in the early identification and timely management of this condition.

**Research Proposal**

The purpose of this research project is to explore the impact of implementing specific nursing actions in the early identification and management of patients who are at risk of a MBO. The researcher will attempt to determine the relationship between proactive nursing actions such as assessments, patient education and nursing management strategies to improve outcomes for women at risk of MBO.

**Literature Review**

Articles on nursing management for gynecology oncology patients at risk for MBO were identified through a search on the following databases: CINAHL, Medline, ERIC, ProQuest Health & Medicine, Athabasca library on-line, Google Scholar, Science Direct and Nursing and Allied Health. The key words used in this literature search included: bowel obstruction nursing assessment, bowel obstruction nursing intervention, bowel obstruction proactive management, oncology nursing telephone triage, COSTaRS AND gynecology, ovarian cancer, malignant bowel obstruction. The search revealed 1233 articles, 1227 articles were rejected due to publication dates before the year 2000 and only peer reviewed nursing publications were considered. The remaining six articles were identified as relevant. Of the six articles, one was a qualitative research study specific to nurse’s experiences caring for patients with MBO while another was a retrospective chart review on the nursing management of symptoms of MBO. Two articles were case studies involving nursing interventions for patients with MBO and two articles discussed the overall nursing actions and palliative care of patients with MBO. Out of the original 1233 articles, six discussed the role of nursing care for patients with MBO.

There is a paucity of literature specific to nursing management of gynecology oncology patients with MBO. Of the articles reviewed, several common themes emerged concerning the nursing care of MBO patients. Several authors described the cluster of symptoms experienced by patients experience with MBO as being nausea, vomiting, abdominal pain, abdominal distention, obstipation or diarrhea (Daines et al., 2013; Lanceley et al., 2011; Letizia & Norton, 2003; Lynch, Dahlin & Bakitas, 2012; Lynch and Sarazine, 2006; Walker & Lane, 2007).

Authors also stated that the management of nausea and vomiting requires both pharmacological and non-pharmacological interventions. When administering pharmaceutical agents, the authors recommended that nurses must assess the effectiveness of these agents in order to appropriately manage these symptoms (Daines et al., 2013; Letizia & Norton, 2003; Lynch, Dahlin & Bakitas, 2012; Lynch and Sarazine, 2006; Walker & Lane, 2007).

The authors further advised that if the symptoms are not improving, this may indicate progression of disease and severity of the MBO. Patients may require non-pharmaceutical interventions, such as nasogastric tubes or venting gastroscopy tubes to relieve symptoms of nausea and vomiting (Daines et al., 2013; Letizia & Norton, 2003; Lynch, Dahlin & Bakitas, 2012; Lynch and Sarazine, 2006; Walker & Lane, 2007).

Suggested nursing interventions include patient education on dietary changes to improve symptom distress (Letizia & Norton, 2003; Lynch and Sarazine, 2006; Walker & Lane, 2007). Additional nursing actions involved the inclusion of the measurement of patients’ distress levels as patients with MBO experience anxiety which can also increase nausea and vomiting (Lanceley et al., 2011; Walker & Lane, 2007).

Daines et al., (2013), in their qualitative study, described how patients with MBO reported fear, uncertainty, being a burden and guilt. The role of the nurse when patients and families are experiencing a pre-terminal MBO event is pivotal. Several authors articulated the crucial role nurses play in supporting patients and families as they transition from curative treatment to palliative symptom management (Daines et al., 2013; Lanceley et al., 2011; Letizia & Norton, 2003; Lynch and Sarazine, 2006). In addition, the therapeutic nurse-patient relationship provides a platform for nurses to listen, engage and acknowledge the impact of the disease as patients struggle with treatment decisions (Daines et al., 2013; Lanceley et al., 2011; Letizia & Norton, 2003; Lynch and Sarazine, 2006). Nurses are also fundamental in advocating measures to improve the emotional and physical quality of life for patients with MBO who are nearing the end of their life (Daines et al., 2013; Lanceley et al., 2011; Letizia & Norton, 2003; Lynch and Sarazine, 2006). Another important nursing function involves navigating patients and families to find resources, educational materials and referrals to achieve informed decisions when making end of life decisions (Daines et al., 2013; Lanceley et al., 2011; Lynch and Sarazine, 2006).

Several authors emphasized the importance of nursing assessment for patients at risk of developing MBO (Daines et al., 2013; Letizia & Norton, 2003; Lynch, Dahlin & Bakitas, 2012; Lynch and Sarazine, 2006; Walker & Lane, 2007). MBO is considered an oncologic emergency, which is why it is imperative that nurses understand the signs and symptoms as well as the disease process when caring for patients at risk for MBO (Daines et al., 2013; Letizia & Norton, 2003; Lynch, Dahlin & Bakitas, 2012; Lynch and Sarazine, 2006; Walker & Lane, 2007). With evidence-based symptom assessment and management nurses are better positioned to improve quality of life for patients and their families (Lynch, Dahlin & Bakitas, 2012). The overall management for MBO patients according to Letizia & Norton, (2003) is through comprehensive care “achieved by attending to careful assessment, implementing and informed plan for controlling symptoms, and providing psychosocial and spiritual support as death approaches” (p.158).

A synthesis of the literature suggests the importance of nurses understanding the disease process, treatment options, symptoms of MBO and referral to palliative care. However, there is no mention on the types of processes that nurses should undertake to provide early detection or intervention to better manage patients at risk of developing MBO. This is an area where further research is needed to ascertain the impact of nursing actions when caring for patients at risk of developing a MBO. Good synthesis

**Thesis**

Proactive oncology nurse-led actions lead to early identification and management of gynecology oncology patients at risk of MBO in an ambulatory setting. These actions have the potential to positively impact outcomes for patients.

**Research Question**

Do proactive oncology nurse-led actions improve outcomes for gynecology oncology patients at risk of MBO in an ambulatory setting?

**Sub Questions**

1. How would nurses identify gynecology oncology patients at risk of MBO?
2. How would nurses monitor gynecology oncology patients at risk of MBO?
3. What types of proactive nursing actions can nurses provide to gynecology oncology patients at risk of MBO?
4. How would nurses measure outcomes of interventions for gynecology oncology patients at risk of MBO?

**Methods**

This study will be quantitative in nature and will involve an experimental simple time-series design. The study population will include patients with a MBO who either presented at an emergency department or were admitted. The study site will be a large urban hospital where patients with MBO are routinely admitted.

The researcher will undertake a retrospective review of charts of patients with MBO and collect data on the cancer centre’s outpatient symptom screening scores, number of admissions, number of emergency department visits and length of hospital stay. The intervention will involve the implementation of a specific nursing protocol including a focused assessment, the delivery of patient and family education and the implementation of proactive telephone assessments using the Pan-Canadian Oncology Symptom Triage and Remote Support (COSTaRS) system (Stacey & Carley, 2017). At the end of six months, data from the retrospective chart review will be compared with patients who received protocol based care to ascertain if there was a change in outcomes with outpatient symptom screening scores, inpatient admissions, emergency department visits and length of hospital stay admissions.

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