

## **Best Practice for Chemotherapy Induced Oral Mucositis**

### **Abstract**

#### **Evidence Based Practice Fellowship**

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**Problem:** Oral mucositis (OM), and inflammation and ulceration of the oral mucosa, can affect up to 100% of patients undergoing chemotherapy treatment for a hematological malignancy. OM has substantial negative consequences for patients, including severe pain, fever, serious infection, and increased length of stay. Patients consider OM to be one of the most debilitating and most distressing side effects of cancer treatment. The aim of this investigation is to identify and implement best practice for chemotherapy induced OM, including supportive care and management of this area in cancer treatment.

**Background:** Patients on a 34-bed bone marrow transplant/hematology/oncology unit, receive high doses of chemotherapy and hematopoietic stem cell transplantation, putting them at high risk for developing OM. The existing oral care protocol included chlorhexidine 0.12% mouthwash and salt and soda oral rinsing three times a day. Chlorhexidine 0.12% was not tolerated by patients, (burning, taste changes, nausea), was no longer indicated by recent guidelines, and administration was inconvenient. Patients were inconsistently educated about OM management and professionals, (i.e. nurses, physicians, pharmacists), were unaware of best practice. The recent, rapid progress in the OM understanding creates a need for an updated oral care protocol, improved patient education, increased professional education, and addition of prophylactic measures.

**Interventions:** A literature review revealed a bundle of interventions as best practice, including an oral care protocol, (regular oral hygiene and bland oral rinses), patient education, professional education, thorough oral assessments and documentation, oral cryotherapy for patients receiving high dose melphalan, and identification of high risk patients. Interventions were prioritized based on ease of implementation and feasibility. To encourage the elimination of chlorhexidine 0.12%, physicians were presented with current research and the high patient refusal rate of chlorhexidine 0.12%. Professional education included a nurse inservice, a nurse test-of-knowledge survey, and presentation of the literature and purposed practice change to physicians and pharmacists. To facilitate the addition of oral cryotherapy, strong evidence in support of oral cryotherapy was presented to the physicians, pharmacists, oncology CNS, and staff nurses. To allow for improved documentation and assessment, adjustments were proposed and approved for the mucositis nurse flowsheet.

**Results:** Chlorhexidine 0.12% mouthwash was discontinued. Salt and soda rinses TID remains a key component to the oral care protocol. Post nurse survey revealed improvements in the following: nurse preparedness on best practices for oral mucositis care, increased patient education, and increased frequency of oral care. 64% of the nurses surveyed reported giving patient care to a patient who used oral cryotherapy during a melphalan infusion. A slight decrease in OM incidence was documented.

**Discussion/Conclusion/Next Steps:** OM is prevalent, thus it is necessary to follow evidence based practice guidelines to manage OM. Although necessary, change is difficult. Challenges surrounded communication and coordination of the key stakeholders involved in the approval of an oral care protocol change. A portion of the

intervention bundle was implemented. Continued efforts are required to implement the entire best practice bundle, including updated standard operating procedures (SOP), ongoing and consistent professional and patient education, improved care plans, and finalization of chemotherapy order changes.

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