

Oral Cryotherapy for Mucositis Prevention

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Published In/Presented At

Pettinati, I. King, J. (2018, August 2). *Oral Cryotherapy for Mucositis Prevention*. Poster presented at: LVHN Vizient/AACN Nurse Residency Program Graduation, Lehigh Valley Health Network, Allentown, PA.

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Oral Cryotherapy for Mucositis Prevention

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Background

- Mucositis is an inflammatory process that can involve the mucosal epithelial cells from the mouth to the rectum
- Mucositis causes painful sores to form in the mucosa
- Oral mucositis affects many patients receiving chemotherapy
- Oral cryotherapy is an easy, effective, and cost efficient solution in treating mucositis
- LVHN practice currently includes normal saline rinses, chlorhexidine rinses, and magic mouthwash but not cryotherapy

PICO

- PICO: Does providing chemotherapy validated nurses on an inpatient oncology unit a TLC module on utilization of oral cryotherapy for reduction of mucocitis compared to no education increase nursing knowledge on benefits of oral cryotherapy in the oncologic patient population?
 - P: chemotherapy validated nurses
 - I: educational module on oral cryotherapy
 - C: compared to no education
 - O: increase nursing knowledge on benefits of oral cryotherapy

Evidence

- “Mucositis occurs in about 40% of patients after standard doses of chemotherapy, and as many as 100% of patients with high-dose chemotherapy” (McGuire, Fulton, Park, Brown, Correa, Lalla, 2013).
- “Two randomized control trials found that use of oral cryotherapy of bolus of 5-FU reduced the incidence of oral mucositis by about 50%” (Wodzinski, 2016).
- “Patient should hold ice in their mouth at least 5-15 minutes prior to start of the infusion, then continuously swish around for the duration of infusion while frequently replenishing the ice chips” (Wodzinski, 2016).
- “Hypothermia leads to vasoconstriction and reduction in blood flow, which decreases the effect of concentrated levels of cytotoxic drugs in the cooled area” (Kadokia, Rozell, Butala, Loprinzi, 2014).
- “Studies show that oral cryotherapy reduces opioid use and decreases need for parenteral nutrition” (Eilers, Harris, Henry, Johnson, 2014).

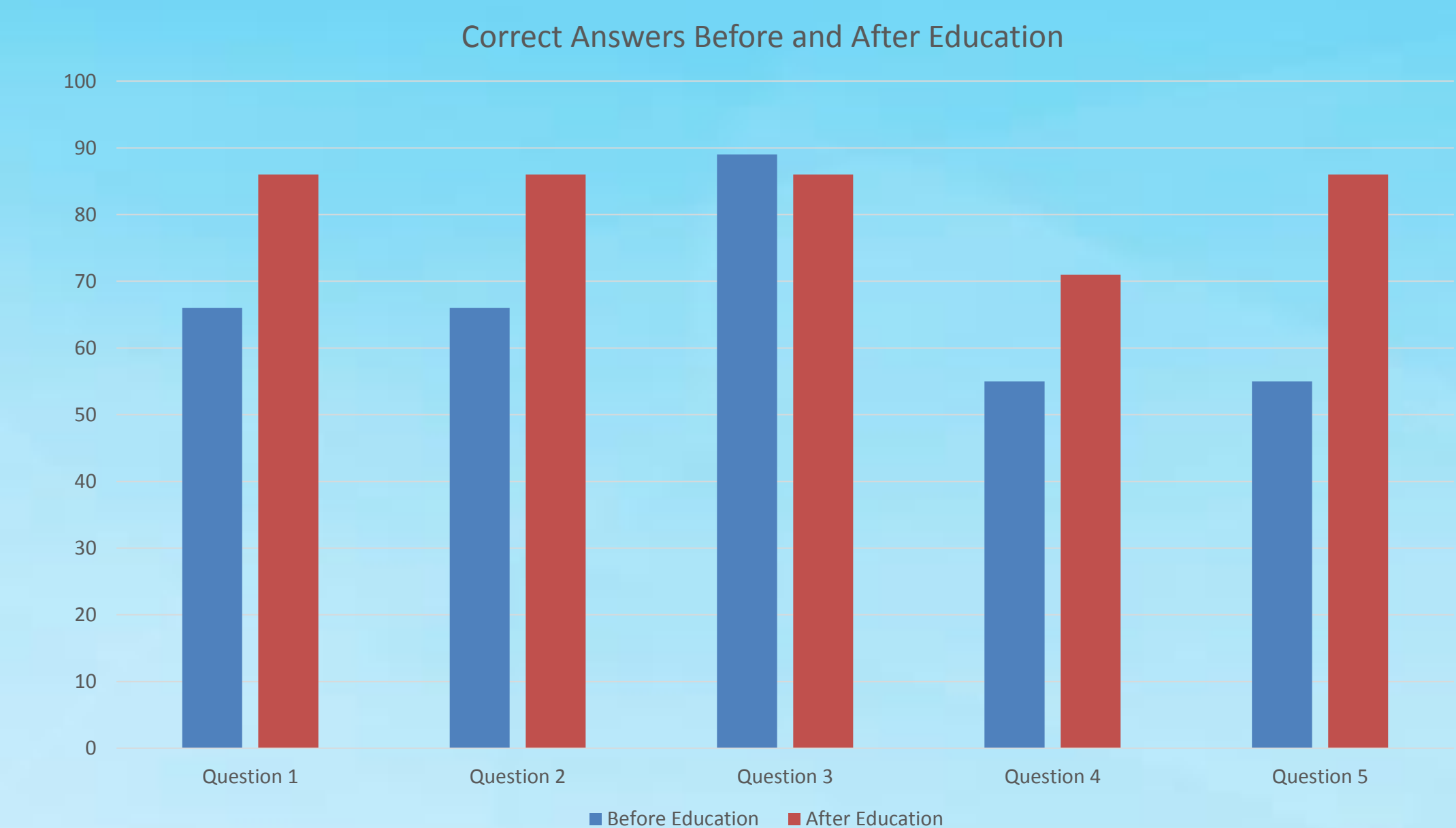
Process

- Data collection began with a survey sent to 16 chemotherapy validated nurses on LVHN-M 5T to assess their knowledge on oral cryotherapy. Out of the 16 nurses who received the survey, 9 completed it.
- An educational PowerPoint presentation was developed and uploaded in our learning management system. This presentation was assigned by the Patient Care Specialist to 16 chemotherapy validated RNs on our unit. Out of the 16 nurses assigned the module, 12 completed the education
- A follow up survey was sent to assess their knowledge on oral cryotherapy post-education. Out of the 16 nurse who received it, 7 completed the post survey.
- Survey questions:

<p>1. How much time should you allow for oral cryotherapy before administering chemotherapy?</p> <p><input type="radio"/> 5 minutes</p> <p><input type="radio"/> 15 minutes</p> <p><input type="radio"/> 30 minutes</p> <p><input type="radio"/> 1 hour</p>	<p>2. For what chemotherapeutic agent(s) is oral cryotherapy not recommended?</p> <p><input type="radio"/> Oxaliplatin</p> <p><input type="radio"/> Carboplatin & Oxaliplatin</p> <p><input type="radio"/> Cisplatin</p> <p><input type="radio"/> Cisplatin & Oxaliplatin</p>	<p>3. Mucositis is an inflammatory process that can involve the mucosal epithelial cells from the mouth to the rectum</p> <p><input type="radio"/> True</p> <p><input type="radio"/> False</p>	<p>4. (select all that apply)</p> <p>Oral Cryotherapy:</p> <p><input type="checkbox"/> Utilizes ice chips</p> <p><input type="checkbox"/> Decreases financial burden for the hospital and patients</p> <p><input type="checkbox"/> Causes vasodilation and reduction in blood flow to the oral cavity</p> <p><input type="checkbox"/> Should be utilized with patients receiving 5FU</p> <p><input type="checkbox"/> Is tolerated by most patients without adverse complications</p> <p>5. Per LVHN policy, the following are used to prevent/treat oral mucositis in chemotherapy patients:</p> <p><input type="checkbox"/> Magic mouth wash</p> <p><input type="checkbox"/> Normal saline rinses</p> <p><input type="checkbox"/> Chlorhexidine rinses</p> <p><input type="checkbox"/> Oral cryotherapy</p>
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Outcomes

- Our data indicates that while many nurses had previous knowledge on oral cryotherapy there was an increase in knowledge after additional education



Next Steps

- Develop a standardized process to administer oral cryotherapy to patients receiving chemotherapy in the inpatient setting.
- Present project at the Network’s Oncology Quality Committee for dissemination of information.

REFERENCES

Eilers, J., Harris, D., Henry, K., & Johnson, L. A. (2014). Evidence-Based Interventions for Cancer Treatment-Related Mucositis: Putting Evidence Into Practice. *Clinical Journal Of Oncology Nursing*, 1880-96. doi:10.1188/14.CJON.S3.80-96

Kadokia, K. C., Rozell, S. A., Butala, A. A., & Loprinzi, C. L. (2014). Supportive cryotherapy: a review from head to toe. *Journal Of Pain & Symptom Management*, 47(6), 1100-1115. doi:10.1016/j.jpainsymman.2013.07.014

McGuire, D. B., Fulton, J. S., Park, J., Brown, C. G., Correa, M. P., Eilers, J., & Lalla, R. V. (2013). Systematic review of basic oral care for the management of oral mucositis in cancer patients. *Supportive Care In Cancer*, 21(11), 3165-3177. doi:10.1007/s00520-013-1942-0

Peterson, D., Ohm, K., Bowen, J., Fliedner, M., Lees, J., Loprinzi, C., & Weikel, D. S. (2013). Systematic review of oral cryotherapy for management of oral mucositis caused by cancer therapy. *Supportive Care In Cancer*, 21(1), 327-332. doi:10.1007/s00520-012-1562-0

Sorensen, J. B., Skovsgaard, T., Bork, E., Damstrup, L., & Ingeberg, S. (2008). Double-blind, placebo-controlled, randomized study of chlorhexidine prophylaxis for 5-fluorouracil-based chemotherapy-induced oral mucositis with nonblinded randomized comparison to oral cooling (cryotherapy) in gastrointestinal malignancies. *Cancer*, 112(7), 1600-1606. doi:10.1002/cncr.23328

Wodzinski, A. (2016). Potential Benefits of Oral Cryotherapy for Chemotherapy-Induced Mucositis. *Clinical Journal Of Oncology Nursing*, 20(5), 462-465. doi:10.1188/16.CJON.462-465

Worthington, H. V., Clarkson, J. E., Bryan, G., Furness, S., Glenny, A-M., Littlewood, A., Khalid, T. (2011). Interventions for preventing oral mucositis for patients with cancer receiving treatment. *Cochrane Database Syst Rev*, 12(4), CD000978. DOI: 10.1002/14651858.CD000978.pub5

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