

ORIGINAL ARTICLE

Efficacy of an Ice Popsicle on Thirst Management in the Immediate Postoperative Period: A Randomized Clinical Trial

Marília Ferrari Conchon, MSN, RN, Ligia Fahl Fonseca, PhD, RN

Purpose: Perioperative thirst is an intense discomfort with high incidence in the immediate postoperative period, but nonetheless, it is highly neglected in clinical practice. The purpose of this study was to evaluate the efficacy of an ice popsicle compared with water at room temperature for thirst relief in the immediate postoperative period in terms of variation in the intensity of the initial compared with the final thirst and the satiety reached after an hour of evaluation and intervention.

Design: A parallel randomized clinical trial was used.

Methods: A total of 208 patients in the immediate postoperative period were assessed for 1 hour, every 15 minutes. Thirst intensity was assessed initially and subsequently; interventions were performed according to the group: (1) control group, 10 mL of water at room temperature; and (2) experimental group, 10-mL ice popsicle.

Findings: The ice popsicle was 37.8% ($P < .01$) more effective than water regarding the intensity variation between the initial and final thirst. The thirst intensity and number of interventions were different for the two groups as from the second moment ($P < .01$). Regarding not reaching satiety after an hour of evaluation and intervention, the relative risk was 41%, the relative risk reduction was 59%, the absolute risk reduction was 31%, and the number needed to treat was 3.2.

Conclusion: Ice popsicle has greater efficacy than water at room temperature for thirst management in the immediate postoperative period.

Keywords: ice, perioperative nursing, recovery room, thirst, water.

© 2016 by American Society of PeriAnesthesia Nurses

SENSATIONS THAT BRING REPERCUSSIONS of an emotional nature—such as pain, sleep, hunger, and thirst—act as a sign of an imbalance in the

Marília Ferrari Conchon, MSN, RN, Londrina State University, Londrina, Paraná, Brazil; and Ligia Fahl Fonseca, RN, PhD, adjunct professor, Londrina State University, Londrina, Paraná, Brazil.

Conflict of interest: None to report.

Address correspondence to Marília Ferrari Conchon, Londrina State University, Rua Conrado Scheller, n 128, Cambé, Paraná, Brazil; e-mail address: lili_conchon@hotmail.com.

© 2016 by American Society of PeriAnesthesia Nurses

1089-9472/\$36.00

<http://dx.doi.org/10.1016/j.jopan.2016.03.009>

body, encouraging humans to adopt certain behavior to restore the balance.¹ Thirst, therefore, causes water-seeking behavior and is one of the most poignant sensations experienced by humans, possibly even compared to overcoming pain and hunger.

Despite the interrelationships between anatomical and physiological functions demonstrating how complex and important thirst regulation is for the maintenance of organic systems, it is still undervalued and undertreated in clinical practice, particularly in the perioperative period.

Surgical teams widely identify and treat common complications, such as pain, nausea, and postoperative vomiting in the immediate postoperative period (IPP). However, staff do not intentionally assess thirst in the IPP and consequently, do not identify, register, or master management strategies. Guidelines suggesting that the patient tolerates thirst to avoid surgical complications are a persistently practiced myth.

During the perioperative period, the surgical patient is exposed to the multifactorial etiology of thirst, originating from physiological changes such as hyperosmolarity and hypovolemia. A major factor for triggering thirst is the prolonged fasting time for liquids and solids before and after surgery, although the current literature recommends shortening the NPO period to 2 hours preop for clear liquids versus the 8 hour or NPO after midnight that is often advocated. Furthermore, the use of anesthetic drugs and the persistence of the opening of the oral cavity for intubation² contribute to frequent,³ high-intensity thirst.⁴

Osmotic thirst is characterized by intracellular water deficit and hypovolemia, due to volume oscillation and intravascular pressure. The integration between the activation and deactivation of specific brain regions—the lateral hypothalamus, prosencephalon, anterior and posterior cingulate cortex, terminal lamina, medial preoptic nucleus, and cerebellum⁵⁻⁸—simultaneously trigger the sensation of thirst and the motivation for water intake in the pursuit of satiety.¹

Postabsorptive satiety occurs when gastric receptors detect a volume of fluid consumed, beginning with a decrease in secretion of the antidiuretic hormone about 5 minutes after fluid intake. Preabsorptive satiety occurs even before the restoration of blood osmolarity and is triggered by the cold temperature stimulus detected by receptors called Transient Receptor Potential Melastatin 8 (TRPM8), which are free nerve endings located in the oropharyngeal region.⁹

These receptors are responsible for transduction of cold stimuli that propagate through electrical impulses via visceral and sensory afferent fibers from the trigeminal and glossopharyngeal nerves to the somatosensory cortex, particularly the Brodmann areas 1, 2, and 3. In this process, the cold

temperature of the consumed fluid is transformed both into the inhibition of the thirst reflex and a pleasure effect, also called aliesthesia, which leads to preabsorptive satiety.⁹⁻¹¹

Aiming to reduce the discomfort of thirst, the use of low efficacy strategies is common in clinical practice, such as wet cotton or gauze to moisten the oral cavity, or the provision of small, nonstandardized quantities of water at room temperature. There is preliminary evidence on strategies to relieve thirst; gargling with cold water; cold sterile water sprays; oral swabs with cold sterile water; and the use of ice chips, which, due to the use of cold temperature, can have positive effects on relieving thirst and oral conditions.^{3,12-17} However, these studies on cold temperature to relieve thirst have no experimental design, a limited number of participants, use small volumes of ice chips, and do not investigate the efficacy of ice on the thirst of patients recovering from surgery, during which time the thirst is frequent and intense.

The study of strategies that are both efficacious and safe to quench the thirst of surgical patients is a necessary step to address this problem in the IPP. Taking into consideration the superiority of cold to alleviate thirst, the use of an ice popsicle is proposed during recovery from anesthetics, with a view to higher efficacy of using small volumes to relieve discomfort and enable self-care in the IPP.

Objective

The objective of this study was to evaluate the efficacy of an ice popsicle compared with water at room temperature for relieving thirst in the IPP in terms of the variation in intensity between the initial and final thirst, as well as the satiety reached after 1 hour of evaluation and intervention.

Method

A randomized clinical trial, in parallel, with two groups: control group (CG; water at room temperature) and experimental group (EG; ice popsicle), following the steps recommended by the Consolidated Standards of Reporting Trials.¹⁸

The study population consisted of patients in the IPP of both sexes, undergoing elective or

Download English Version:

<https://daneshyari.com/en/article/8575055>

Download Persian Version:

<https://daneshyari.com/article/8575055>

[Daneshyari.com](https://daneshyari.com)