

ANESTHESIOLOGIST'S PERSPECTIVE REGARDING THIRST IN THE IMMEDIATE POSTOPERATIVE PERIOD

Ana Carolina Korki Arrabal Garcia*
Leonel Alves do Nascimento**
Marília Ferrari Conchon***
Aline Korki Arrabal Garcia****
Lígia Fahl Fonseca*****

RESUMO

This study intended to explore the perception of anesthesiologists on thirst identification and management, a highly prevalent symptom in the immediate post-operative period. Qualitative and descriptive study conducted at a large university hospital in Southern Brazil, with participants: seven anesthesiology professors and four anesthesiology residents. Data was collected through semi-structured instrument and the speeches were analyzed through the methodological framework described by Martins and Bicudo. The Human Research Ethics Committee of the Universidade Estadual de Londrina (State University of Londrina) approved the project (CAAE: 02299412.6.0000.5231). The results originated two categories: "Thirst: the undetected symptom", which highlights the lack of intentional assessment of thirst, and "Finding difficulties in the assessment and management of thirst", which demonstrates the absence of protocols to support its management. The study concluded that anesthesiologists perceive thirst as a symptom of lesser importance in the immediate postoperative period, so it remains sub-identified, sub-measured and sub-treated in clinical practice.

Key words: Thirst. Postoperative period. Anesthesia. Perioperative nursing.

INTRODUCTION

Characterized by the constant observation of the patient's vital parameters, care in the immediate postoperative period (IPOP) aims at the early identification of complications, enabling the multidisciplinary team to act preemptively in the resolution, ensuring a quick, safe and comfortable recovery⁽¹⁾. The anesthesiologist plays a key role in the care for the patient in the IPOP, coordinating the therapeutic and intervention actions with the purpose of promoting perioperative welfare⁽¹⁾.

One of the complications that can affect the patient in the IPOP is thirst, which has high prevalence (75%)⁽²⁾ and interferes adversely in the post-anesthetic recovery. Reports of patients indicate that it causes great distress and, thus, entails negative feelings such as anxiety and irritability, with allusions to feelings of despair and even thoughts of death⁽³⁾.

Although, in the IPOP, thirst has high prevalence and intensity and represents distress, paradoxically it remains sub-identified and sub-measured, and relief measures in clinical practice are not

standardized^(1,5).

Different processes can cause the surgical patient to feel thirsty. Among them, excessive fasting during the preoperative period, contrary to scientific evidence^(2,5). Perioperative anxiety and anesthetic medications, particularly opioids and anticholinergics, act on the reduction of salivary secretion, drying out the oral cavity, which, in turn, induces the release of antidiuretic hormone, intensifying thirst⁽⁶⁾. Intraoperative bleeding is responsible for triggering hypovolemic thirst^(2,6). Consequently, the surgical patient is part of a group at high risk for developing this symptom.

Thirst can be measured by various means: blood osmolarity, brain activity exams and, more commonly, by the use of analog, visual and numerical scales, which provide a relation with hormonal and osmotic changes⁽⁷⁾.

The intensity is not the only sign of thirst. It can also be identified and measured by its attributes, which generate intense discomfort: dry mouth and throat, parched lips, thick saliva and tongue and bad taste in the mouth⁽⁸⁻⁹⁾.

Even with these findings, health professionals do

*Nurse. Master in Nursing. Lecturer in the undergraduate program in nursing at the Integrated Regional University (URI) – Campus Santiago. Santiago, RS, Brazil. E-mail: lehmachado@yahoo.com.br

**Nurse. Doctor in Nursing. Professor of the Nursing Department of the Federal University of Santa Maria (UFSM). Santa Maria, RS, Brazil. carmembeck@gmail.com

***Nurse. Master in Nursing. PhD student of the graduate program in Nursing at the UFSM. Santa Maria, RS, Brazil. alexa.p.coelho@hotmail.com

****Nurse. Doctor in Nursing. Assistant Professor of the Nursing Department of the UFSM. Santa Maria, RS, Brazil. weiller2@hotmail.com

*****Nurse. Doctor in Nursing. Assistant Professor of the Nursing Department of the UFSM. Santa Maria, RS, Brazil. silviaufsm@yahoo.com.br

not value the perioperative thirst. This fact can be the reflection of the institutional culture, in which the team's actions derive from knowledge without evidence that diffuse the need for maintaining prolonged and unbreakable fasting. Therefore, it hampers the adoption of strategies to relieve thirst that may confront medical prescription⁽⁵⁾.

The multidisciplinary team is responsible for conducting a safe and comfortable recovery for the patient. During this period, the decision regarding the fasting time or diet release in the IPOP, as well as the administering methods of relieving thirst, is subject to the permission of the anesthesiologist⁽¹⁾. However, the lack of protocols and safe methods of relief leads to adopting conservative strategies, keeping patients in absolute fasting, in both the pre as the IPOP⁽⁵⁾. Thus, it is essential to understand the vision of this professional regarding thirst, a symptom so prevalent and distressing in the perioperative.

Since thirst in the surgical patient has been little investigated by the scientific community, it has not been an object of discussion in class associations, which have not included it in their guidelines so far⁽¹⁰⁾. Given the gaps on the theme in the literature, the Study and Research Group on Thirst (GPS - Grupo de Estudo e Pesquisa da Sede) of the State University of Londrina (UEL) aims to explore it in its multiple aspects. Under this approach, the objective of this study was to explore the perception of the anesthesiologist about the identification and management of thirst in the IPOP.

METHODOLOGY

This is a qualitative, descriptive study, conducted at a large teaching hospital in Southern Brazil. The surgical center of the institution consists of seven operating rooms, which receive a monthly average of 500 surgeries, and post-anesthesia care unit (PACU) with six beds for adults and children.

The study sample consisted of the anesthesiologists who were in the operating room unit during June 2012, who were invited to participate in the research. After accepting and signing the informed consent form, the interviews were recorded and transcribed.

For data collection, we used a semi-structured instrument, contemplating the following guiding questions: what are the discomforts you perceive in the patient in IPOP? How do you perceive that the

patient is thirsty? Tell me about the parameters that you use to identify, evaluate, and release a method of thirst relief.

Data analysis was based on the methodological framework described by Martins and Bicudo⁽¹⁰⁾. At first, we performed the ideographic analysis, which refers to the intelligibility of the present meanings, working in an interrelated way and in their structural unity. Secondly, in the nomothetic analysis, there was the construction of the results, understanding and elucidation of the studied theme⁽¹¹⁾.

The participants were identified only by the letter P for professors and R for residents of Anesthesiology, followed by a sequence number. The study preserved the ethical precepts and received approval of the Human Research Ethics Committee of the UEL (CAAE: 02299412.6.0000.5231).

RESULTS AND DISCUSSION

Eleven anesthesiologists participated in this study: seven professors (four women and three men) and four of the six residents (two women and two men) who worked in the unit during the data collection period.

After analyzing the speeches, two categories emerged: "Thirst: the undetected symptom" and "Finding difficulties in the assessment and management of thirst".

Thirst: the undetected symptom

The discomfort that the patient presents in the IPOP is part of the first category. According to the perception of anesthesiologists, the main discomforts are:

Well, [...] in the immediate postoperative period, they usually feel pain, nausea and vomiting, which are the three major discomforts that I really notice (R6).

Post-surgical complications are common during care in the PACU and are related to the preoperative conditions, type of surgical procedure and pharmacological-anesthetics, but are also linked to complications in the intraoperative period. One of the most common complications include hypotension and hypertension, hypovolemic shock, ventilatory disorders, pain, nausea, vomiting and hypothermia⁽¹²⁾.

Complications such as pain, nausea and vomiting have been widely studied and taken into

account in evidence-based protocols⁽¹²⁾. On the other hand, thirst, although causing great discomfort, presenting high incidence and, for some patients, being more uncomfortable than hunger and pain^(2,13), is little studied. In practice, it is almost never evaluated intentionally and its importance is minimized, making it a discomfort neglected by professionals, remembered only when the patient complains of thirst^(4,5).

The respondents mentioned thirst as a discomfort present in the IPOPOP, but not without observing that:

It is not the primary discomfort I treat [...] perhaps because the team itself worries more about the pain and nausea than with thirst [...] even though he complains of thirst (D5).

Thirst was mentioned in the course of the interview when participants associated the theme to the research in which they were participating. According to them, the verbalization of the thirst is the primary method of identification, therefore, if the patient does not verbalize thirst, this discomfort becomes less important for the team assisting that patient. They added that few clinical signs indicate thirst:

[...] they generally present pain, nausea, vomiting, pruritus, urinary retention and others[...]and they often feel hungry and thirsty indeed[...] (D10).

[...] from the verbal request...since, when the patient is thirsty, he tells us[...]he complains a lot and asks for water... this is the only way (D1).

[...] I identify it through the spontaneous complaint of the patient[...]of course there are some signs[...] but, it is often by their verbal complaint (R2).

Oh, thirst does not have many physiological signs[...]so, it is important for the patient to report the thirst for us, the anesthesiologist or the nursing team (R7).

Detecting signs of thirst requires, firstly, appreciation by the team, which should search for them sensitively and deliberately. Communication is not always effective, and the professionals' conduct is reduced to continuously reaffirming the need to maintain an unbreakable fasting, sometimes accompanied by threats of canceling the surgery and occurrence of nausea and vomiting in the postoperative period⁽⁵⁾.

The distress caused by thirst in the surgical patient is so intense that it is appropriate to consider it a symptom that requires multifactorial actions to humanize the care to the thirsty patient. According

to the Symptom Management Theory, a symptom is a subjective experience that reflects changes in biophysical functioning, sensations or individual cognition. The model's main purpose is the perception of the individual who experiences the symptoms and his/her self-report, and it also highlights and includes cultural, environmental and health/disease aspects that interfere with the verbalization of the symptom, stressing the need to detect it early in specific risk groups⁽¹⁰⁾.

The surgical patient has high susceptibility to the thirst symptom because of fasting, exposure to low temperatures in the operating room, opening of oral cavity due to intubation, and use of pharmacological anesthetics, and high possibility of large blood loss and tissue dehydration⁽¹⁴⁾.

As the surgical patient recovers his/her interoception, he/she becomes able to identify that he/she is thirsty. The attitudes regarding this nuisance vary according to cultural and psychological characteristics and with the guidance received before the surgical procedure⁽⁴⁾.

A study by the GPS found that only 13% to 18% of thirsty patients verbalize it spontaneously. These low rates are due to the fear of suspension of their surgery and the possible occurrence of vomiting by fasting interruption, leading the patient not to report thirst even after the surgical procedure⁽⁴⁾. While the anesthesia team identifies the patient's spontaneous verbalization regarding thirst as a way to diagnose it, it does not appreciate the complaint sufficiently, nor includes it in a systematized evaluation in the IPOPOP.

Paradoxically, regardless of the non-appreciation of thirst, the patients' reports are poignant, when pointing out that thirst can trigger anxiety, stress and even despair^(4,6,10,13,15). For example, cardiac surgery patients in IPOPOP reported that "The worst is thirst; you feel so thirsty that even seeing a person cleaning the floor...listening to that water noise, that thing, you just want to jump there. I almost died of thirst"^(13:5).

In relation to clinical signs of thirst, anesthesiologists notice that:

[...]decreased salivation, dry mouth and cracked lips (D5).

[...]thick saliva, sore throat, cracked lips, difficulty swallowing, lack of saliva, and verbal complaint of thirst(D8).

Although anesthesiologists have reported that clinical signs of thirst facilitate the identification of the symptom, some have difficulty detecting these

signs, identifying thirst only when in its worst severity:

Well, [...] just like I have said [...] I think that, when the patient starts to show physiological changes, it indicates dehydration, even a light dehydration (R7).

[...] it becomes apparent when the patient is dehydrated... but we cannot let it get this far (D1).

Dehydration can cause deleterious effects to the health of the patient who faces surgical trauma, such as: weight loss, increased heart rate and capillary refill time, loss of skin elasticity, dryness of mucous membranes, decreased urine synthesis⁽⁷⁾. These effects could be avoided with the early detection and management of the thirst symptom.

The statements show that the team taking care of the surgical patient has consolidated the notion that extremely high scores of thirst are necessary, leading the patient to verbalize his/her thirst, in order to motivate favorably the professionals to consider ways to alleviate this symptom.

The statements show another factor to consider: [...] in many years working, in fact, I have never thought over patients' thirst, because I think it is not a discomfort at all, or because I do not hear about it that much (D4).

Thirst [...] is not the first thing I observe [...], on the contrary, I have heard patients complaining he is thirsty few times [...], but it does not mean he was not thirsty [...] I think we do not worry about it that much (R6).

The devaluation of this distressing symptom by anesthesiologists is explicit, as well as the absence of deliberate processes in the team to identify and handle it in the IPOP:

I have never heard anyone asking a patient if he was thirsty or not [...], actually, I think I have never asked it, we always check if he is in pain, but not thirsty (R11).

Look, [...] to tell you the truth, I have treated the patients' thirst few times (R7).

Thirst is a symptom intensely experienced by patients hospitalized in the ICU, and yet, a routine assessment is lacking in that environment. When it is in fact assessed, there is a tendency to be ignored, because of the perception that nothing can solve it⁽¹⁵⁾.

Finding difficulties in the assessment and management of thirst

The second category that emerged from the analysis of the speeches discusses the difficulties assessing and managing thirst. One of the causes of not assessing thirst is the lack of research and protocols:

Do you know that, in all my years of profession, I have never read anything regarding the way we should treat patient's thirst in the immediate postoperative period? It does not mean that it should be left aside and without treatment (D10).

I have never read anything about it, I have searched a lot for it, but there are few studies or protocols that help in the management of thirst in the immediate postoperative period (D3).

In addition to using scales to measure thirst intensity, it is important to perceive the discomfort due to the multifactorial nature of this symptom⁽²⁾.

Given this scenario, the GPS developed and validated the Perioperative Thirst Discomfort Scale (EDES) in order to measure the perception of discomfort felt by these patients⁽⁹⁾.

According to the anesthesiologists' reports, they do not evaluate thirst, nor perform actions for its relief simply because:

In fact, the nursing team almost never tells me that the patient is thirsty. What I see many times is that they {nursing team} give water to the patient, put water in his mouth, without previously communicating me (R7).

Because of the work process and the numerous activities developed in the surgical environment, anesthesiologists, mostly from Brazilian hospitals, return to the operating room for a new procedure soon after handing patient's care to the nursing team, spending little time with the patient in the PACU.

The nursing team is responsible for the continuity of patient's care in the IPOP, assisting him/her integrally, with a periodicity that characterizes semi-intensive care. When there are adverse signs and common complications in the IPOP, the nursing staff communicates the anesthesiologist, requesting assessment and conduct for the symptom or complication.

One of the possible causes for the lack of communication between the members of the multidisciplinary team about patient's thirst is still the lack of interest in searching for signs of thirst or evaluating and managing it, by both the anesthesiologists as the nursing team⁽⁵⁾. Fear of

nausea and vomiting that occurs with consequent bronchoaspiration and the myth that the patient needs to be in absolute fastinglead medical and nursing teams to opt for a conventional and conservative behavior, keeping fasting for extreme periods. Scientific evidence points out the incidence of nausea and vomiting in 7% of patients in theIPOP⁽¹⁶⁾.

For the authorization of the water intake, the criteria most valued by anesthesiologists are:

[...] the level of consciousness, whether he is awake or asleep[...] but especially if he can swallow, once it represents less risk of aspiration[...]then, yes, I authorize it(R7).

The literature still lacks studies that fully evaluate perioperative thirst and present safety criteria for the administration of relief methods. A study that assessed safety in administering methods for relieving thirst validated and tested the reliability of a security protocol in the management of the thirst. The proposed security criteria (level of consciousness, airway protection and absence of nausea and vomiting) allow an intentional, systematic, standardized and quick safety assessment to administer therelief method for thirst in the perioperative period, if properly applied within the institutions that receive surgical patients⁽¹⁷⁾.

Another way of assessing the safety criteria for authorizing water intake reported by the respondents includes:

[...] the type of anesthesia, pharmaco-anesthetics used, performed surgery, the organic system manipulated and the patient's condition at that particular moment[...]if he is conscious, if he can swallow, if there is any contraindication for the water intake, if he is speaking, obeying verbal commands [...].Then we can release his water intake (D9).

Depending on the type of surgical procedure, there is no scientific evidence contraindicating water intake in the IPOP. On the other hand, there is evidence that stimulate early intake of water and food⁽¹⁸⁾.

The conduct adopted by anesthesiologists regarding the thirst symptom varies according to the professional. The speeches show that there is no consensus between the conducts for the management of symptoms, such as:

[...] to humidify the perioral region with distilled water, which greatly improves the discomfort in the

immediate postoperative period. And I release water too, always in low volume [...]around 5 ml to decrease the chances of nausea, vomiting and bronchoaspiration (R2).

[...] I asked for the nurse to get that sachet of distilled water and offer to the patients, around 20 ml, so that there is no risk of vomiting and aspiration (D4).

Although the perioral humidification can have palliative effect on the perception of thirst, its action is fleeting. However, the use of ice in the form of frozen gauze with saline solution, small tablets or water popsicles is effective in the relief and satiation of thirst^(2,14,19).

The cold temperature of ice stimulates oropharyngeal receptors, called Transient Receptor Potential Melastatin 8 (TRPM8), present in both the skin as the oral cavity. These receptors are sensitive to low temperatures and menthol and eucalyptus-derived substances^(13,20), capable of producing a pleasant sensation of pleasure and comfort, leading to satiety with a smaller intake volume compared to icy water, decreasing even more the risks for the patient⁽³⁾.

These advances in the management of perioperative thirst can mean a decrease of this discomfort for the patient in anesthetic recovery, once adopted in the clinical practice.

FINAL CONSIDERATIONS

The results of this study indicate that, compared to other discomforts and complications in the IPOP,thirst is the least appreciated by anesthesiologists,regarded as a secondary discomfort, identified almost exclusively by the patient's verbal complaint. Still, when detected, the interventions for its relief are empirical.

The scarcity of studies on the subject constituted a limitation of the investigation, not allowing the discussion of the results with similar surveys.

Multidisciplinary expertise is extremely important in the identification, measurement, evaluation of safety and use of effective strategies to alleviate patient's thirst, reducing his/her discomfort and resulting in safe and comfortable recovery.

This study opens the way to new questions about reasons why the perioperative team does not considerthirst in the IPOP. One hypothesis is that myths and beliefs interfere in a more proactive approach in the evaluation of thirst and in the attempt to relieve this discomfort. Understanding the

perspective of the professionals involved will contribute to the implementation of strategies aimed at changing paradigms in patient's care in the

clinical practice and, therefore, reducing the suffering caused by thirst for an unnecessarily extended period.

PERSPECTIVA DO ANESTESIOLOGISTA EM RELAÇÃO À SEDE NO PÓS-OPERATÓRIO IMEDIATO

RESUMO

O estudo teve como objetivo explorar a percepção de anestesiológicos sobre a identificação e manejo da sede, sintoma altamente prevalente no pós-operatório imediato. Estudo qualitativo e descritivo realizado em um hospital universitário de grande porte no Sul do Brasil, com onze participantes, sendo sete docentes e quatro residentes de anestesiologia. Os dados foram coletados por meio de instrumento semiestruturado, e os discursos, analisados pelo referencial metodológico descrito por Martins e Bicudo. O projeto foi aprovado pelo Comitê de Ética em Pesquisa Envolvendo Seres Humanos da Universidade Estadual de Londrina (CAAE: 02299412.6.0000.5231). Dos resultados emergiram duas categorias: "Sede: um sintoma não percebido", que evidenciou a falta de avaliação intencional da sede, e "Encontrando dificuldades para a avaliação e manejo da sede", que demonstrou a ausência de protocolos que subsidiassem e estabelecessem o seu manejo. Concluiu-se com o estudo que, para os anestesiológicos, a sede ainda se mostra como um sintoma de menor relevância no pós-operatório imediato. Este cenário requer ações multidisciplinares e intencionais para que este sintoma não continue sendo subidentificado, submensurado e subtratado na prática clínica.

Keywords: Sede. Período pós-operatório. Anestesia. Enfermagem perioperatória.

PERSPECTIVA DEL ANESTESÍLOGO EN RELACIÓN A LA SED EN EL POSTOPERATORIO INMEDIATO

RESUMEN

El objetivo del estudio fue explorar la percepción de anestesiólogos sobre la identificación y el manejo de la sed, síntoma altamente prevalente en el postoperatorio inmediato. Estudio cualitativo y descriptivo en un hospital universitario de gran porte en el Sur de Brasil, con once participantes, siendo siete docentes y cuatro residentes de anestesiología. Los datos fueron recolectados por medio de un instrumento semiestruturado, y los discursos analizados por el referencial metodológico descrito por Martins y Bicudo. El proyecto fue aprobado por el Comité de Ética en Investigación Envolviendo Seres Humanos de la Universidad Estadual de Londrina (CAAE: 02299412.6.0000.5231). De los resultados surgieron dos categorías: "Sed: un síntoma no percibido", que evidenció la falta de evaluación intencional de la sed, y "Encontrando dificultades para la evaluación y el manejo de la sed", que demostró la falta de protocolos que subsidiaran y establecieran su manejo. Se concluye con el estudio que, para los anestesiólogos, la sed aún se muestra como un síntoma de menor relevancia en el postoperatorio inmediato. Este escenario requiere acciones multidisciplinares e intencionales para que ese síntoma no continúe siendo subidentificado, submensurado y subtratado en la práctica clínica.

Palabras clave: Sed. Período posoperatorio. Anestesia. Enfermería perioperatoria.

REFERENCES

1. Nascimento LA, Tramontini CC, Garanhani ML. O processo de aprendizagem do residente de anestesiologia: uma reflexão sobre o cuidado ao paciente. *Rev Bras Educ Méd.* 2011;35(3):350-8.
2. Aroni P, Nascimento LA, Fonseca LF. Assessment strategies for the management of thirst in the post-anesthetic recovery room. *Acta Paul Enferm.* 2012;25(4):530-6.
3. Puntillo KA, Arai SR, Stotts NA, Nelson JE. A randomized clinical trial of an intervention to relieve thirst and dry mouth in intensive care unit patients. *Intensive Care Med.* 2014; Jan 40(9):1295-302.
4. Silva LCJR, Aroni P, Fonseca LF. I am thirsty! Experience of the surgical patient in the perioperative period. *Rev SOBECC.* 2016;21(2):75-81.
5. Pavani MM, Fonseca LF, Conchon MF. Thirst in surgical patients: perceptions of the nursing team in inpatient units. *Rev Enferm UFPE.* 2016; 10(9):3352-60.
6. Arai SR, Stotts NA, Puntillo KA. Thirst in critically ill patients: from physiology to sensation; *Am J Crit Care.* 2013; 22(4):328-35.
7. Arai SR, Butzlaff A, Stotts NA, Puntillo KA. Quench the thirst: lessons from clinical thirst trials. *Biol Res Nurs.* 2014 Oct;16(4):456-66.
8. Martins PR, Fonseca LF. Avaliação das dimensões da sede: revisão integrativa. *Rev Eletr Enf.* 2017;19:a09. doi.org/10.5216/ree.v19.40288.
9. Martins PR, Fonseca LF, Rossetto EG, Mai LD. Developing and validating the Perioperative Thirst Discomfort Scale. *Rev Esc Enferm USP.* 2017;51:e03240. doi.org/10.1590/S1980-220X2016029003240.
10. Conchon MF, Nascimento LA, Fonseca LF, Aroni P. Sede perioperatória: uma análise sob a perspectiva da teoria de manejo dos sintomas. *Rev Esc Enferm USP.* 2015 fev; 49(1):122-28.
11. Martins J, Bicudo MAV. A pesquisa qualitativa em psicologia: fundamentos e recursos básicos. 5ª ed. São Paulo: Centauro; 2005.
12. Welte LVT, Fonseca LF. Avaliação da recuperação do paciente no pós-operatório na ausência de sala de recuperação anestésica. *Rev Enferm UFPE on line.* 2016; 10(6):2091-9.
13. Gois CFL, Aguillar OM, Santos V, Rodríguez EOL. Fatores estressantes para o paciente submetido a cirurgia cardíaca. *Invest Educ Enferm.* 2012 Jan;30(3):312-9.
14. Conchon MF, Fonseca LF. Efficacy of an ice Popsicle on thirst management in the immediate postoperative period: a randomized clinical trial. *J Perianesth Nurs.* 2016: 1-9.
15. Dessotte CAM, Rodrigues HF, Furuya RK, Rossi LA, Dantas RAS. Stressors perceived by patients in the immediate postoperative of cardiac surgery. *Rev Bras Enferm.* 2016;69(4):694-703.

16. Machado ECB, Pompeo DA, Rossi LA, Paiva L, Dantas RAS, Santos MA. Caracterização de pacientes no pós-operatório imediato segundo a presença de náuseas e vômitos. *Ciênc Cuid Saúde*. 2013;12(2):249-56.

17. Nascimento LA, Fonseca LF. Sede do paciente cirúrgico: elaboração e validação de um protocolo de manejo seguro da sede. *Rev Enferm UFPE*. 2013; 7(3 esp):1055-8.

18. Yin X, Ye L, Zhao L, Li L, Song J. Early versus delayed postoperative oral hydration after general anesthesia: a prospective randomized trial. *Int J Clin Exp Med*. 2014; 7(10):3491-6.

19. Garcia AKA, Fonseca LF, Aroni P, Galvao CM. Strategies for thirst relief: integrative literature review. *Rev Bras Enferm*. 2016 Nov-Dec;69(6):1215-22.

20. Du-plessis L, Dommels Y, Wilkinson JE. Cold pleasure. Why we like ice drinks, ice-lollies and ice cream. *Appetite* [internet]. 2013 [citado 2015 Jan 12]; 71:357-60.

Corresponding author: Ana Carolina Korki Arrabal Garcia. Rua Marcílio Dias, nº 125, apt 601. Londrina, Paraná, Brasil.
E-mail: aninha_korki@hotmail.com

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