

Pre-operative 'Thirst Assessment and Management in Cancer Patients in Tertiary Care Centre in Lahore

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Abstract

Pre-operative thirst is common and may cause intense patient discomfort. It is a powerful symptom that surpasses all other sensations. The etiology of per-operative thirst is complex and has not been yet completely exposed. Among various pathophysiologic factors, preoperative fasting and intraoperative fluid loss may lead to hyperosmolarity and hypovolemia. Moreover, certain drugs utilized in anesthetic practice (e.g., glycopyrrolate and other anticholinergic agents used for reducing salivary secretion) may promote a thirst sensation, which may be further intensified by prolonged surgical and intubation times. Pre-procedure fasting is used to reduce the risk of vomiting and aspiration pneumonia during sedation and general anesthesia. However, prolonged fluid restriction causes thirst symptoms to develop (e.g., dry mouth, swollen tongue), which can lead to great discomfort. Several factors contribute of patients' thirst. In the preoperative period, absolute fasting for prolonged periods (eg, more than six hours) and preoperative anxiety and fear trigger hormonal reactions that result in decreased saliva production, which dries the oral cavity. In the intraoperative period, medications, orotracheal intubation, and bleeding can cause dehydration Current guidelines related to pre-procedure fasting for elective procedures recommend a minimum fasting period of 2 hours Nil-Per-Oral (NPO) for clear fluids. Despite these recommendations, current practice is for patients undergoing surgical and other medical procedures that require sedation or anesthesia to receive standardized "nil-by-mouth" fasting instructions at a pre-specified time interval before procedures. For example, "no eating or drinking after midnight" is most common. It is not common for fasting instructions to be updated even when there are significant delays in procedure start time As a result, fasting durations far exceed the recommended requirement for most patients undergoing medical and surgical procedures. Prolonged fasting for many hours prior to surgery could lead to unstable hemodynamics, might be potentially harmful and influence on cardiac preload as well as it has significant effect on patient recovery.

Objectives:

- To identify the intensity and discomfort caused by thirst in pre-operative patients.
- To assess the management of patients' thirst in pre-operative phase.
- To assess the satisfaction level of patients after intervention.

Materials and Methods: Cross Sectional Study was used at Operating Room at SKMCH & RC in two months. 147 patients were participated through the convenience techniques.

Results: 147 (100%) patients participated in study after informed consent, 53% of breast, 43% of urology and 1% of orthopaedics patients participated. 79% were day cases and 21% were admitted patients. 16% of patients reported very thirsty, 76% were reported thirsty and 6% were neutral. 83% of patients' responded very uncomfortable and 17 % were a little uncomfortable due to thirst. There is a positive relationship intensity with thirst discomfort. 67% of patients received intervention and 33% refused to take intervention. 83% were satisfied after intervention 17% were very satisfied.

Conclusion: The incidence of thirst intensity and discomfort is high in patients during the per-operative period. Thirst needs to be evaluated by the healthcare team that works in the per-operative area, for it to be appropriately treated. However, care improves by proper and timely assessment and management of thirst in surgical patients.

Keywords: Cancer • Etiology • Anesthesia

Introduction

Pre-operative thirst is common and may cause intense patient discomfort. It is a powerful symptom that surpasses all other sensations [1-3]. The etiology of per-operative thirst is complex and has not been yet completely exposed [3,4]. Among various pathophysiologic factors, preoperative fasting and intraoperative fluid loss may lead to hyperosmolarity and hypovolemia [5-7]. Moreover, certain drugs utilized in anesthetic practice (e.g., glycopyrrolate and other anticholinergic agents used for reducing salivary secretion) may promote a thirst sensation, which may be further intensified by prolonged surgical and intubation times [8-10]. Pre-procedure fasting is used to reduce the risk of vomiting and aspiration pneumonia during sedation and general anesthesia [11,12]. However, prolonged fluid restriction causes thirst symptoms to develop (e.g., dry mouth, swollen tongue), which can lead to great discomfort [12,13]. Several factors contribute of patients' thirst. In the preoperative period, absolute fasting for prolonged periods (eg, more than six hours) and preoperative anxiety and fear trigger hormonal reactions that result in decreased saliva production, which dries the oral cavity. In the intraoperative period, medications, orotracheal intubation, and bleeding can cause dehydration [14,15]. In 2020, the Thirst Study and Research Group researchers observe that thirst can continue to increase during surgery, culminating in intense patient discomfort in the Immediate Post-op phase but perioperative team members may not routinely value, identify, measure, or treat this symptom [16]. Current guidelines related to pre-procedure fasting for elective procedures recommend a minimum fasting period of 2 hours Nil-Per-Oral (NPO) for clear fluids. Despite these recommendations, current practice is for patients undergoing surgical and other medical procedures that require sedation or anesthesia to receive standardized "nil-by-mouth" fasting instructions at a pre-specified time interval before procedures. For example, "no eating or drinking after midnight" is most common. It is not common for fasting instructions to be updated even when there are significant delays in procedure start time [14-16]. As a result, fasting durations far exceed the recommended requirement for most patients undergoing medical and surgical procedures [17-19]. Prolonged fasting for many hours prior to surgery could lead to unstable hemodynamics, might be potentially harmful and influence on cardiac preload as well as it has significant effect on patient recovery [20-22]. The standard practice of "nothing by mouth" has been applied for decades in patients undergoing elective surgeries. However, recent data indicate that a liberal fasting scheme does not increase the risk in these patients. [23-25]. A carbohydrate-rich drink significantly reduces pre-operative discomfort without affecting gastric content [25]. Decreased fasting time was related to a lower incidence of nausea and vomiting in patients undergoing laparoscopic cholecystectomy. The patient satisfaction assessment has been used as a measurement of clinical trial outcomes,

consultations, and workload [26,27] However, little is known about its benefit, particularly on anesthesia care satisfaction of patients who received a drink in the pre-operative and postoperative periods. Anxiety is a state of imminent danger, which involves a lot of tension and suffering and may cause increased heart rate, increased blood pressure, sweating, tremors, heavy breathing, and muscle tension. It may be influenced by internal (personal) and external (environment) factors. The hospitalization process itself may bring anxiety to the patient. Depression is also a possible reaction in hospitalized patients. It is closely related to stress and anxiety before surgery [27,28].

Therefore, minimizing the factors that can cause anxiety is important to avoid physical and psychological health consequences. The nutritional status increases the risk of post-operative complications and mortality in patients with cancer [27-29].

Purpose/Objectives of study

- To identify the intensity and discomfort caused by thirst in pre-operative patient.
- To assess the management of patient' thirst in pre-operative phase.
- To assess the satisfaction level of patient after intervention.

Definitions

Thirst is a sensation of dryness in the mouth and throat associated with a desire for liquids.

Hypothesis

- Does the prolong NPO increase thirst intensity and discomfort?
- Does the intervention has effects on patient thirst?

Material and Methods

Study Design: Cross sectional Study

Setting: Operating Room at SKMCH & RC

Duration: 2 Month

Sample Size: 147 patients were participated.

Sampling Techniques: Convenience techniques will be used

Inclusion Criteria: Patient undergoing surgical procedure of Breast, urology and orthopedic under general anesthesia.

Exclusion Criteria: Pediatric patients less than 12 years, Patients having surgeries other than Breast, urology and orthopedic surgeries, Not willing to participate

Study Procedures

After IRB approval, patient will be followed for consent discussion and after obtaining the written informed consent, patient will be asked about thirst intensity and discomfort as per PTSD scale in pre-operative phase holding bay area as well as NPO duration for water/ clear fluid which should be 2 hours before surgery. If the NPO duration is prolonged (more than two hours) and surgery is still pending for 2 hours or more. Intervention in form of water 50 ml to 100 ml will be administered. Patient will be reassessed for thirst intensity and discomfort as well as satisfaction level of the thirst.

Data analysis and Statistical methods

SPSS version 20 present in graphical form in Chapter.

For studies involving surveys/questionnaires

List all of the measures/instruments that will be used for this study and attach copies.

Indicate the member(s) of the study team who will use these measures/instruments and any necessary qualifications such as special training or licenses (Figures 1-5).

Human research subject protection

- Risk/Benefit Assessment: NA
- Risks, Discomforts and Potential Harms: NA
- Potential Benefits and Alternatives: NA
- Informed Consent: Informed written consent was taken.
- Data Privacy and Confidentiality: Data stored and maintained in the locked file and will be accessed by the authorized personnel only

Results

Patient characteristics

- 147 (100%) patients were participated in research study.
- There is age range from 16 years to 78 years of patient and mean age was 45 years.

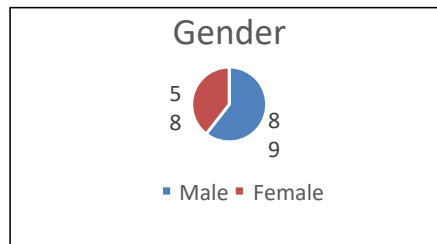


Figure 1. There were 60% male and 40 % female patients were participated.

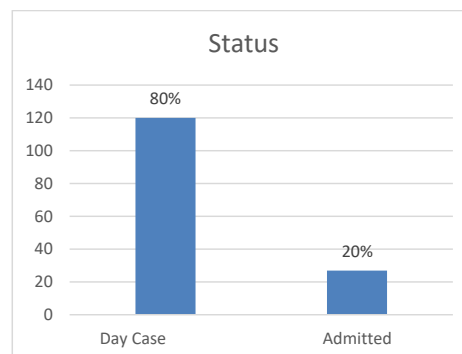


Figure 2. Showing 80% day cases and 20% were admitted.

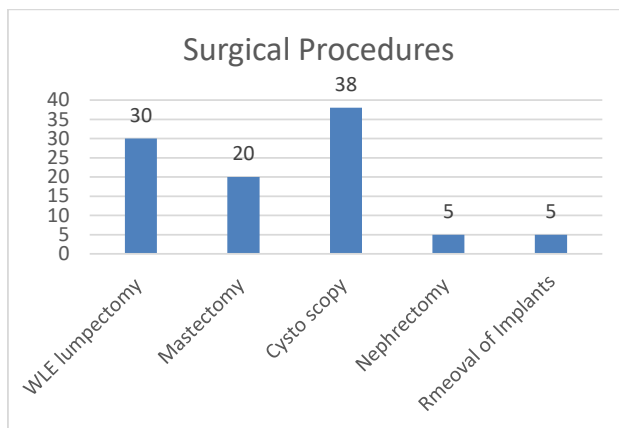


Figure 3. The maximum NPO duration were reported 16 hours before surgical procedure.

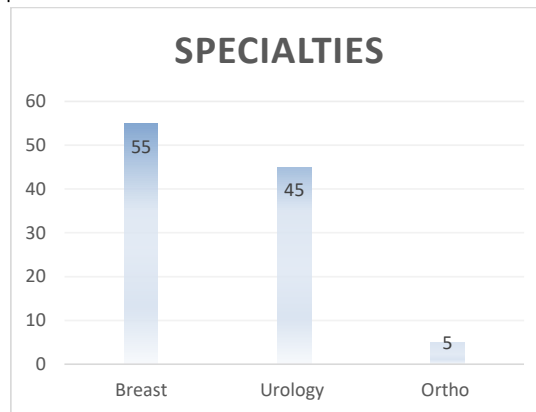


Figure 4. Three different specialty and different surgical procedure.

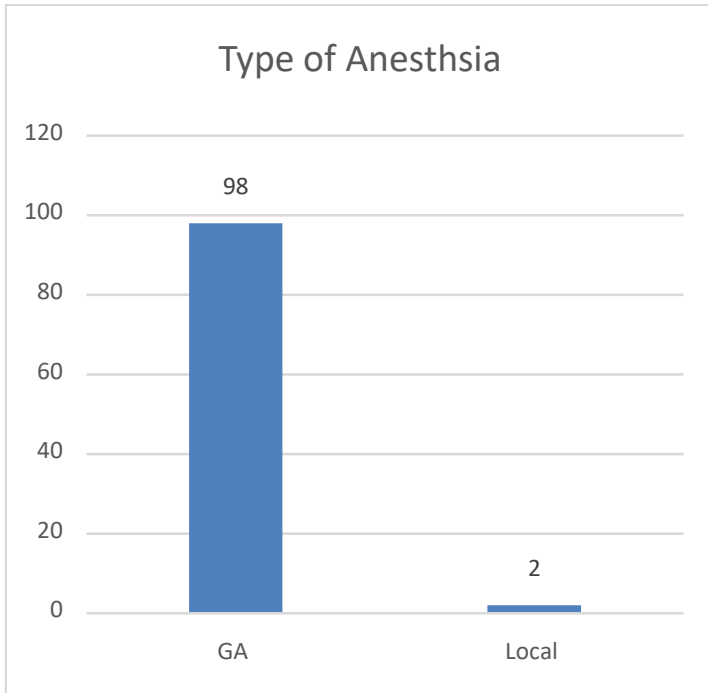


Figure 5. 98 % patient were administered the general anaesthesia.

The maximum Nil-Per-Oral (NPO) duration were reported 16 hours before surgical procedure, then 14 hours, 12 hours, 10 hours and 8 hours (Table 1).

Table 1. Table depicting NPO duration before surgery day.

NPO duration before surgery day	
16 hours	15%
14 hours	50%
12 hours	20%
10 hours	10%
8 hours	5%

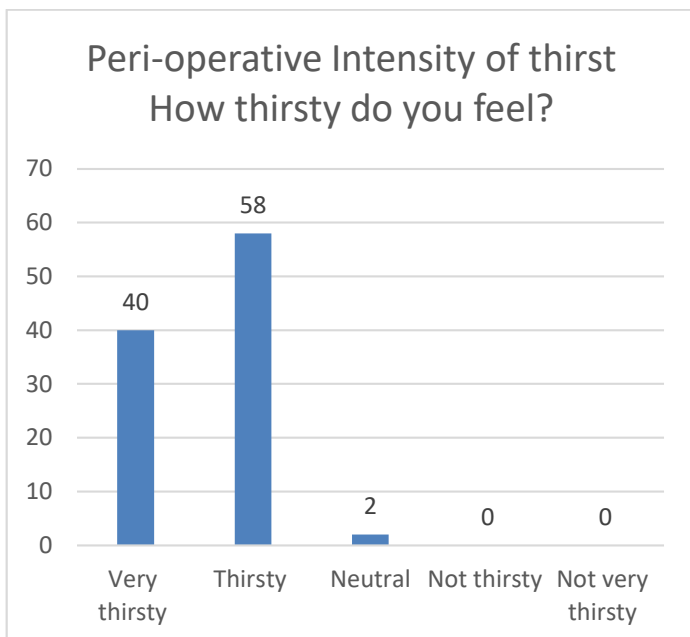


Figure 6. Intensity of thirsty.

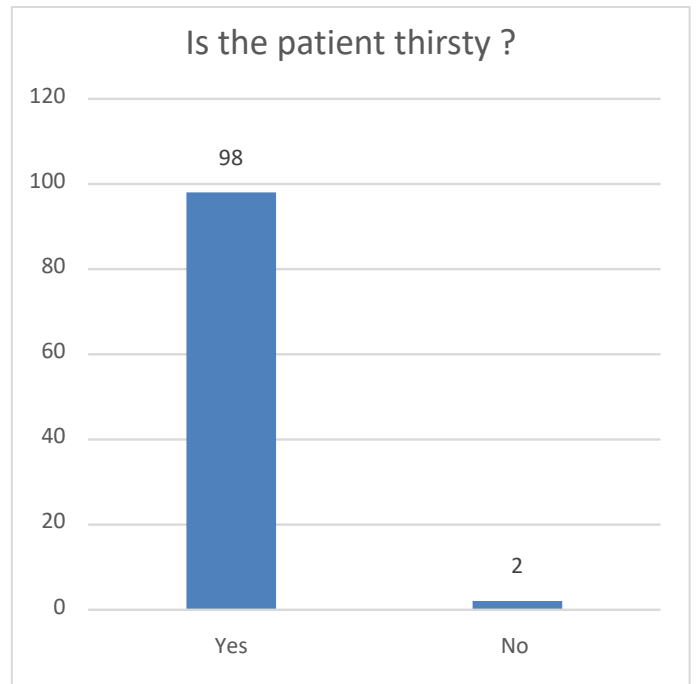


Figure 7. 98% patient were reported thirst.

Discomfort caused by thirsty

In this study, 80% patients were report they felt dryness on month and lips. 70% reported dryness in tongue and 60% reported that saliva was thick, dryness in throat and bad tate in mouth. Very few of patients reported that less symptomts because of thirst (Figures 6-10).

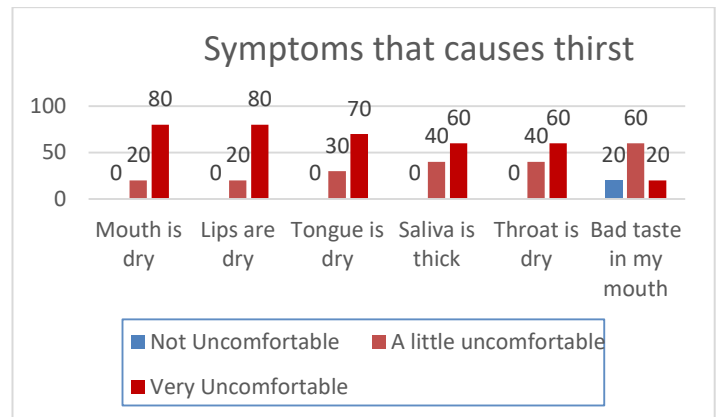


Figure 8. This figure showed that there are symptoms the cause by thirst.

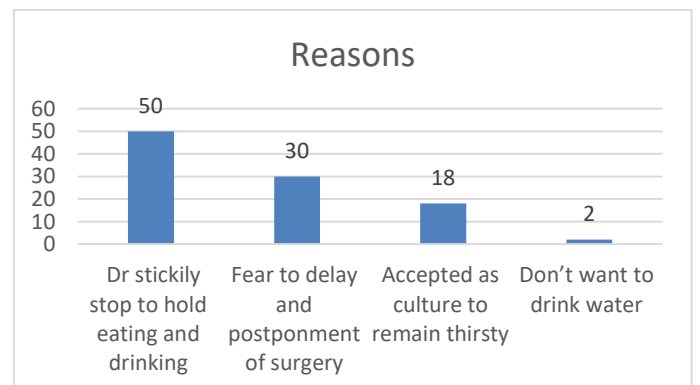


Figure 9. There were signified responses were identified to refused to take management. 50% were patient refused because they reported that dr strickily hold of stop eating and drinking, 30% stated that they had fear to delay the surgery, 18% were responded that accepted as culture to remain thirsty and 2% do not want to drink water.

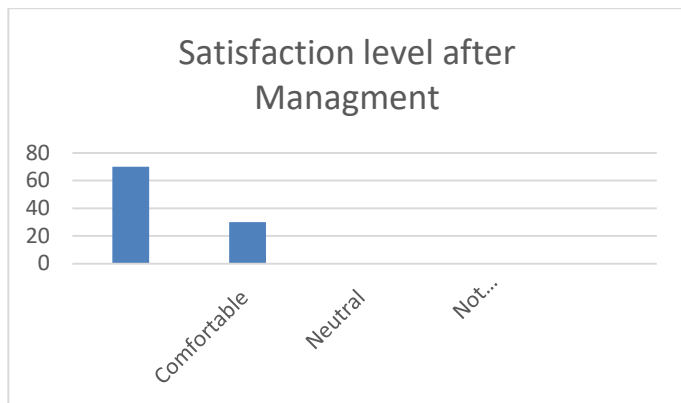


Figure 10. 70% patient very satisfied and 30% patient were comfortable after management.

Discussion

This study clearly confirms that the preoperative thirst may arise from a variety of reasons, including time of fasting that triggers the homeostatic mechanism of thirst, anesthesia, drugs used, bleeding during surgery, anxiety and nervousness regarding the outcome of the surgery, and pain, among others [11-13].

The discomfort of thirst is real and causes stress to the patient, assaulting him. Ingesting liquids in times of thirst is a basic need of any individual; even if the patient understands rationally the necessity of the fast, this does not diminish his discomfort and suffering. This discomfort is reported by other studies as a major stressor in the view of the patient in per-operative cardiac surgery units [21-23]. This study in conducting in Cancer hospital and cancer is the leading cause of death among patients, these patients represent a significant workload, not just for the operating department and surgical wards, but for the entire health system. Perioperative care is also becoming more complex, with an increasing number of patients taking several specific drugs for concomitant diseases. The anesthesiologist must take this into account when planning the anesthetic and analgesic techniques [15,16]. The classification used in this study showed a good correlation of intensity with discomfort. The questionnaire used for preoperative thirst evaluation proved that what they have been informed preoperatively about fasting, many patients said they prefer to follow the doctor's orders to avoid suspension of their surgeries [17,18]. In 2006, it was reported that the average time of fasting from all solids and liquids was 16 h, and adult patients presenting for elective surgery with this long time of fasting is common. The fasting time in NPO group was slightly shorter, about 14 h compared to other study, and 80% of patients reported feeling thirsty or hungry [18, 19].

However, the fasting time was about 3 h, with only two reports of thirst, which resulted in greater satisfaction for patients. In a recent cochrane systematic review involving studies, it was found that there was no evidence that a shorter fasting time increased the risk of aspiration, regurgitation, or morbidity compared with a standard NPO regimen. Our results confirm that 50 ml-100 ml water did not increase morbidity compared with NPO. Thirst and hunger are the most important factors for pre-operative discomfort, followed by anxiety [23, 25]. In our study, the intake of 50 mL of water before surgery not only reduced the preoperative thirst and hunger, but provided greater satisfaction to patients. This study was conducted patients with cancer, as they represent a group of patients in which the gastrointestinal tract is totally free. Because no patient had nausea and vomiting [25, 26]. The perception of thirst involves a number of components including dry mouth, dry lips, thick tongue, thick saliva, dry throat, bad taste, and desire to drink water which may have subtle distinctions. The use of different scales to assess pre-operative thirst discomfort may lead to variations in its prevalence across different studies. For example, the frequency of dry mouth in the pre-operative period may be as high as 80%. We therefore resorted to a simple assessment tool based on an NRS. Most of the patients who declined thirst management had low thirst scores, which may explain their unwillingness to receive thirst alleviation strategies [27, 29]. Our study confirms that early hydration with 50 ml to 100 ml of room temperature water is safe for the management.

Limitation

Future research should examine whether administration of higher water quantity or an increased number of ice cubes will further decrease thirst without increasing post-operative nausea and vomiting. Further research is needed to survey the presence and intensity of post-operative thirst in patients receiving glycopyrrolate administration during surgery.

Recommendation

Management of NPO duration by effective communication with patients. Must perform timely thirst assessment to prevent patients' discomfort. Staff should know when to offer thirst management. Must have proper Template and Performa for recording the thirst level of the patient.

Although additional research may be needed and the associated assessment tool can help perioperative nurses address their patients' perioperative thirst concerns .

Conclusion

The incidence of thirst intensity and discomfort is high in patients during the per-operative period. Thirst needs to be evaluated by the healthcare team that works in the per-operative area, for it to be appropriately treated. Some of the challenges of its implementation include making team members aware of the relevance of the thirst symptom and overcoming institutional Patients have provided positive feedback to health team members about thirst relief. strategies, However, care improves by proper and timely assessment and management of thirst in surgical patients.

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