REVISTA O MUNDO DA SAÚDE

Food and nutrition insecurity in the perioperative period of surgical oncology patients

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Abstract

Evidence has reinforced the idea that shortening perioperative fasting reduces avoidable complications and discomfort. However, the reality of prolonged fasting persists and compromises the food and nutritional safety of surgical patients in Brazilian hospitals. The present study aimed to investigate the characteristics of food and water fasting in cancer patients in the perioperative period. Sixty patients admitted for elective surgeries in the treatment of cancers of the gastrointestinal tract participated. At the bedside, a questionnaire was applied and complemented by records from the operating room and medical records. During fasting, approximately 1 hour before and 4 hours after surgery, patients reported their last and first meal as well as water intake, food complications, hunger, and thirst. A descriptive and inferential statistical analysis was conducted. There was a wide variation concerning duration with a median of 17 hours (min. 5hr – max. 330hr) of preoperative food fasting and 14.1 hours (min. 2.25hr – max. 417hr) of water fasting. Postoperatively, the median time of food and water fasting was 19.2 hours (min. 2.42hr – max. 200hr) and 21 hours (min. 2.5hr – max. 201hr), respectively. Food and water fasting was excessively prolonged, and their application did not take into consideration determinant characteristics of nutritional risk such as age, pre- and post-fasting dietary offer, food complications, and discomfort due to hunger and thirst.

Keywords: Perioperative care. Patient safety. Food and nutrition security. Surgical oncology.

INTRODUCTION

Food and Nutrition Security comprises the fulfillment of the primary right for regular and permanent access to sufficient basic foodstuffs, without compromising other essential needs. Thus, its implementation promotes and preserves the health of the individual, respecting their culture in a socially, economically, and environmentally sustainable way[1, 2].

Food and nutrition insecurity, however, encompasses more than low food intake or hunger, but the unpredictability of this situation. This confirms its applicability as an indicator of inequalities in health, since the assessment of the imposition of this unacceptable human condition contributes

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to research and investments directed towards its solution at the individual, institutional, and global levels[3].

The aggressive antineoplastic approaches in the different modalities of primary, palliative, adjuvant, and neoadjuvant treatments must be analyzed as factors of food and nutritional insecurity; especially when combined with other factors that go beyond insufficient nutrient intake, such as hypercatabolism and a complex inflammatory state, in patients who are already nutritionally vulnerable due to the severity of the disease itself[4, 5].

The nutritional status of the patient, especially oncological patients, directly influences their perioperative evolution and can significantly affect the outcome of their surgery. Even in the preoperative period, nutritional care should be initiated with the aim of preventing malnutrition or minimizing its effects. The health team should consider nutritional care as an essential practice for the safety of the surgical patient, since the response to surgical trauma can trigger the onset or worsening of malnutrition, reduced immune response, reduced healing, and increased risk of infection[4-6].

Prolonged preoperative fasting is highly deleterious for patients as it adds metabolic stress to the planned surgical trauma, starting from the increase in glucagon secretion and transient insulin resistance, which can last up to three weeks after the procedure, to the activation of gluconeogenesis also intensifying the metabolic stress in the postoperative period[7, 8].

For elective surgeries, the routine practice of "nothing by mouth" or overnight fasting has been applied for decades to avoid aspiration events of gastric fluid during an induction of anesthesia (Mendelson's Syndrome)9. However, scientific evidence over the years indicates that the abbreviation of fasting does not add risks to the procedures[10-13]. The administration of a beverage enriched in carbohydrates, for example, is indicated as effective and safe for the reduction of preoperative discomfort without impacting the volume of gastric fluid[8, 14].

Since prolonged food and water fasting affects fundamental factors for physical and psychological well-being in the perioperative period[15], the shortening of fasting also reduces food complications, such as nausea and vomiting, anxiety level, time, and costs of hospital stay[6, 10-13].

Fasting is a trivial practice in hospital routines, so its optimization through scientific knowledge can benefit the true protagonist of health, the patient[9-14,16]. However, even though prolonged fasting is a reality in hospitals in Brazil[17] it has passed unnoticed and without critical discussion by care teams and prescribing professionals[11,16]. Thus, this research aimed to investigate the characteristics of food and water fasting in cancer patients in the perioperative period.

METHODS

This is a descriptive cross-sectional study, with patients ≥ 18 years old of both sexes admitted for elective cancer surgeries in any part of the gastrointestinal tract (from mouth to rectum) in a public health center, specialized in oncology in the state of Pernambuco, Brazil. Sampling was based on convenience according to admission to the head and neck cancer surgery and digestive surgery (esophagus, stomach, and intestine) sectors. Specific surgical approaches to organs attached to the digestive tract were excluded.

Data collection was carried out between March and July 2017, using a self-developed

questionnaire, pre-coded and tested in a pilot study. The application of the questionnaire took place with the patient, at the bedside, in the pre and postoperative periods.

The first visit, and invitation to participate in the study, took place about one hour before the scheduled time for the surgical procedure to ask about socioeconomic data, last meal and water intake (date, time, menu), hunger, thirst, and food complications that occurred during the fasting period. Additionally, their interest in the shortening the fasting was questioned.

The second visit took place within 4 hours after the time of release of the diet provided for in the medical prescription after the procedure was performed. If the diet was not released as prescribed, a new visit was scheduled after the update of the medical prescription and until the diet was actually resumed. The participant was asked about their first meal and water intake (date, time, menu), hunger, thirst, and food complications that occurred during the fasting period that preceded the resumption of their diet; in addition to their interest in abbreviating the fasting period.

Information on the diagnosis, prescription of diet and/or fasting, proposal and duration of the procedure were retrieved from the operating room records (anesthesia record) and medical records. The menu and mealtimes reported by the participant were confirmed by the institution's nutrition service records.

Preoperative fasting was considered as the difference (in minutes, for calculation purposes) between the last meal (reported by the patient) and the beginning of surgery (recorded in the anesthesia record). Postoperative fasting, in turn, corresponded to the time (in minutes) between the end of the surgery (recorded on the anesthesia record) and the first meal (reported by the patient).

For the analysis, the following were established as dependent variables: quantification of pre- and postoperative fasting time; the nutritional composition of meals that preceded and immediately followed the fasting period; food complications (nausea, vomiting, dizziness and/or asthenia) and the sensation of thirst and hunger (classified as yes or no). The group of independent variables were: age, sex, comorbidities (systemic arterial hypertension (SAH) and/or diabetes mellitus (DM)), and tumor location.

Data were recorded by double-entry where consistency was checked and validated. Subsequently, statistical analysis was performed using the Statistical Package for Social Sciences program (SPSS version 23). Descriptive data were analyzed with absolute frequencies and percentages for qualitative variables, and as median (minimum - maximum). The inferential statistical analysis was performed using the Mann-Whitney test and the non-parametric Kruskal-Wallis test. The selection of the normal hypothesis of the data was through the Shapiro-Wilk test. The margin of error considered was 5% and a p-value <0.05.

The present work followed all the ethical legislation of research with human beings. It was approved by the Ethics Committee of the Pernambuco Society for the Fight against Cancer (No. 50732015.5.0000.5205). The informed consent form was signed by each research participant.

RESULTS

The study involved the participation of 60 patients, with a mean age of 61 years old, hospitalized for elective cancer surgery in a hospital that did not follow perioperative fasting abbreviation protocols during the study period. Most (55%) had completed elementary school, most (65%) were hospitalized in the digestive surgery ward and the remaining 35% in the head and neck surgery ward, where colon and rectal cancers (43.3 %) and oral cavity cancers (35%) were the most frequent diagnoses.

Table 1 shows all the results related to the sociodemographic and clinical profile of the sample.

For both pre- and postoperative periods, there was great variation and asymmetric distribution of the duration of food and water fasting. The median of preoperative food and water fasting was 17.0 hours (min. 5hr – max. 330hr) and 14.1 hours (min. 2.25hr – max. 417hr), respectively. As a result of the cancellation of surgery for 38.3% of patients undergoing preoperative preparation, due to lack of vacancies in the operating room, lack of staff or material, the sample was reduced to 37 patients for postoperative analysis. For these operated patients, the median postoperative food and water fasting was 19.2 hours (min. 2.42hr – max. 200hr) and 21.0 hours (min. 2.5hr – max. 201hr), respectively.

The characteristics of actual fasting versus prescribed fasting are shown in Figure 1. It was observed that 58.3% of the patients experienced a fasting greater than what had been prescribed while the second highest percentage (21.7%) corresponded to those who the preoperative prescription did not even mention fasting instructions. Only 6.7% actually fasted as prescribed by the doctor.

The nutritional composition of the last meal before fasting and the first intake after surgery, according to Table 2, did not vary significantly depending on the perioperative period. The institution's nutrition service followed a limited menu of meals that were classified for this study as "glycidic" (carbohydrate-based) when offering coconut water, juice, or tea (sweetened or not) with cookies or gelatin, and "mixed" when offering porridge, bread with cheese or cream cheese, dairy-based drink or milk, and complete lunch or dinner. The mixed composition meal, unlike the carbohydrate meal, which is presented mostly in liquid consistency, demonstrates greater digestive complexity due to the presence of protein and lipids in its composition.

Most patients (78.3%) reported the absence of food complications during the preoperative fasting period. Reports of nausea, dizziness, asthenia, or more than one food event ranged from 1.7% to 8.3%. However, just over half of the patients (55.0%) reported feeling hungry during preoperative fasting, and 45.0% were thirsty in the same period. A total of 40.0% of patients expressed a desire to fast less than what they were experiencing before surgery.

With regard to the 37 patients who underwent surgery and their perceptions of postoperative fasting, it was observed that 54.1% consumed a first meal of mixed nutritional composition after surgery.

Most patients reported feeling hungry (64.9%) and thirsty (67.6%) during post-operative fasting. As for the reports of food intercurrences during postoperative fasting (56.7%), they were mainly dizziness (18.9%) and the combination of more than one type of food intercurrence (21.6%).

Half of the patients expressed their preference for a shorter postoperative fast (Table 2).

In the preoperative period, it was found that there was no statistically significant difference regarding fasting time and age group, comorbidities, tumor location, or the feeling of hunger.

Concerning the ward, there was a statistically significant difference between patients in the digestive surgery ward who underwent both preoperative ($p = 0.044$) and postoperative ($p = 0.043$) fasts longer than patients in the head and neck surgical ward. The association between food events and prolonged preoperative fasting was also

statistically significant (p = 0.040). While in the postoperative period, still in Table 3, only the ward variable showed a statistically significant difference for the aforementioned fasting time.

There were no statistically significant differences between the categories of tumor location or the sensation of thirst in relation to preoperative water fasting, according to the results presented in Table 4. Likewise, there were no statistically significant differences between the aforementioned variables related to postoperative water fasting.

Table 1 – Sociodemographic and clinical profile of surgical cancer patients. Recife - PE, 2017.

	Patients N=60
	N (%)
Age group	
up to 59 years	22 (36.7)
≥ 60 years	38 (63.3)
Sex	
Male	28 (46.7)
Female	32 (53.3)
Level of schooling	
Never went to school	16 (26.7)
Elementary	33 (55.0)
High School	10 (16.7)
University education	1 (1.7)
Presence of comorbidities	
SAH*	21 (35.0)
DM†	1 (1.7)
SAH + DM	6 (10.0)
None	32 (53.3)
Surgical ward	
Digestive Sur.	39 (65.0)
Head and neck Sur.	21 (35.0)
Tumor location	
Oral cavity	21 (35.0)
Esophagus	4 (6.7)
Stomach	9 (15.0)
Colon and rectum	26 (43.3)

(*): Systemic arterial hypertension;
(†): Diabetes Mellitus.

Table 2 – Characteristics of food and water fasting periods, pre- and postoperatively, in cancer patients. Recife - PE, 2017.

	Preoperative N (60)	Postoperative N (37)
	N (%)	N (%)
Nutritional composition of the evaluated meal		
Glycidic	30 (50.0)	17 (45.9)
Mixed	30 (50.0)	20 (54.1)
Feeling of hunger	33 (55.0)	24 (64.9)
Feeling of thirst	27 (45.0)	25 (67.6)
Food complications		
Nausea	1 (1.7)	2 (5.4)
Dizziness	5 (8.3)	7 (18.9)
Asthenia	2 (3.3)	4 (10.8)
More than one	5 (8.3)	8 (21.6)
None	47 (78.3)	16 (43.2)
Preference for an abbreviated/ shorter fast	24 (40.0)	18 (50.0)

Table 3 – Analysis of perioperative food fasting in cancer patients according to clinical characteristics and hunger sensation. Recife - PE, 2017.

	Preoperative Median (hours)		Postoperative Median (hours)	
Age group		p-value		p-value
up to 59 years	14.62	(†)0.812	16.25	(†)0.233
≥60 years	17.25		20.33	
Hypertension				
Yes	17.00	(†)0.941	16.00	(†)0.941
No	17.33		20.30	
Diabetes				
Yes	14.15	(†)0.534	30.30	(†)0.243
No	17.00		19.00	
Nursery				
Digestive Sur.	17.33	(†)0.044*	24.00	(†)0.043*
Head and neck Sur.	13.41		18.75	
Tumor location				
Oral cavity	13.42		18.75	
Esophagus	16.87	(‡)0.105	42.50	(‡)0.120
Stomach	14.75		52.00	
Colon and rectum	17.75		20.00	
Feeling of hunger				
Yes	17.00	(†)0.567	19.46	(†)0.356
No	17.00		16.25	
Food complications				
Yes	20.50		20.58	
No	16.50	(†)0.040*	16.25	(†)0.125

(*): Statistically significant difference, at 95% confidence level.
(†): Mann-Whitney test. (‡): Kruskal Wallis Test.

Table 4 – Analysis of perioperative water fasting in cancer patients according to tumor location and thirst sensation. Recife - PE, 2017.

	Preoperative Median (hours)		Postoperative Median (hours)	
Tumor location		**p-value**		**p-value**
Oral cavity	11.75	(‡)0.761	20.25	(‡)0.165
Esophagus	16.88		43.50	
Stomach	13.33		55.00	
Colon and rectum	15.59		21.42	
Feeling of thirst				
Present	13.33	(†)0.672	21.58	(†)0.604
Absent	14.25		18.37	

(*): Statistically significant difference, at 95% reliability level.
(†): Mann-Whitney test. (‡): Kruskal Wallis Test.

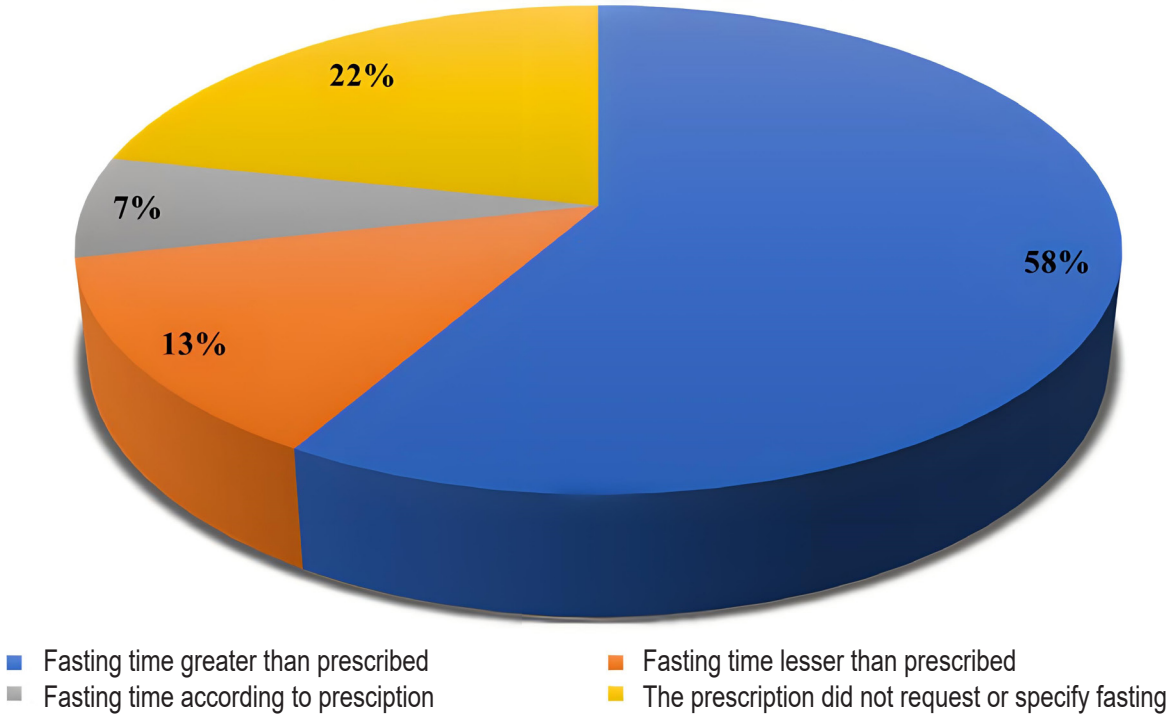

Figura 1 – Characteristics of periods of real food and water fasting versus prescribed fasting, in surgical oncology patients. Recife, PE, 2017.

DISCUSSION

Fasting, orally or alternatively - understanding that the infusion of glycosylated solution does not constitute nutrition or food intake, but "non-nutritional" calories[6] - observed in this research, seriously differs from the recommendations available in the scope of surgery and anesthesiology. The scenario described in the present study revealed the discrepancy between the reality experienced by the participants and the recommendations consolidated by the literature. There are, for example, societies and associations that officially adopt 2 hours of fasting for clear liquids (including water) and 6-8 hours for solid foods preoperatively[5,16,18,19].

Furthermore, the contrast between actual versus prescribed fasting – when in fact prescribed – reflects the lack of standardization from the application of the personal perception of health team members to the failure of communication with the patient. This contrast has already been reported both in hospitals that adhered to the abbreviation of fasting protocols and in services that maintained the traditional protocols[17,20,21], transforming the discussion to the construction of good communication with the patient as one of the fundamental pillars for ensuring patient safety.

Postoperative fasting times (food and water) found in the present study corroborate the number repeatedly indicated by consensus and guidelines that recommend earlier refeeding, which impacts the acceleration of patients' recovery[22, 23] and that indicate food reintroduction time be a maximum of 12-24 hours, always taking into account the size of the surgery and organs addressed[5,16,18,19]. However, postoperative fasting times are qualitatively distant from the recommendations because they do not demonstrate a significant difference regarding the type of surgery, age and consequently greater nutritional vulnerability, or the presence of comorbidities, and even less due to reports of hunger and thirst, for their establishment.

The sociodemographic profile of the sample of this study is consistent with the publication of estimates of cancer incidence in Brazil[24], in which the elderly are the most affected population group[10], as well as colon and rectal cancer being the most prevalent types in the digestive tract, for both sexes[24, 25].

Regarding the nutritional composition of pre- and post-fasting meals, no relationship was found with the establishment of fasting behaviors. There is consensual knowledge that liquids are influenced by the pressure gradient between the stomach and the duodenum, the volume, caloric density, pH, and osmolality of the gastric fluid, which spend an average of 10 minutes on gastric emptying[16,18,19]. Moreover, for solids, emptying requires more time, starting only after one hour of ingestion[19].

Therefore, the relevance of these different physiological mechanisms makes them the main guides for the world recommendations currently used[16,18,19]. When these factors are disregarded the planning of perioperative fasting expresses a lack of criteria for its prescription, establishment, and compliance. The same lack of association observed regarding food and water fasting and the location of the tumor and, consequently, the organ surgically approached, strengthens the non-standardization of perioperative care for these cancer patients.

The analysis of the sensation of hunger and thirst, from the patient's perspective, has been used as one of the indicators of quality of care regarding comfort, well-being, and the bioethical principle of non-maleficence10, 26. In relation to this verification, both preoperatively and postoperatively, most patients reported feeling hungry and thirsty and the

report of desiring a shorter fast did not exert any influence on the abbreviation of this experience.

The sensation of persistent thirst is one of the damages caused by prolonged fasting, since it can reduce gastrointestinal and salivary secretions, thus, increase thirst and dryness in the mouth and can even lead to dehydration[8] and hydroelectrolytic changes known to correlate with emetic episodes, for example[15]. From this point of view, the abbreviation of fasting should also be considered for its implication in reducing discomfort with thirst, anxiety, and improving well-being[27].

Considering that the sensation of thirst and hunger can culminate in increased anxiety, dehydration, irritability, weakness, and despair which directly and negatively impacts the post-surgical recovery of patients, the questioning of the process of humanized health care in the practice of digestive surgery is relevant and urgente[8,26].

Attention should be paid to the occurrence of a prolonged postoperative water fasting compared to food, although the digestive complexity for water does not justify a longer gastrointestinal rest. The generalized orientation of "free diet" can lead to the interpretation that "diet" refers only to food, not including water. Or even the prescription of the end of fasting in the medical documentation without the patient being duly informed, may have generated this unexpected discrepancy. The effectiveness of the team's communication of fasting and the patient's level of understanding warrants in-depth observations in further studies.

As for the statistical difference between the fasts practiced in the two wards investigated, it is suggested that the impairment of digestion and absorption functions, common in approaches to the stomach and intestine, affects the prescription of longer fasts in the digestive surgery ward. This is similar to the description made by other authors[23,28] who recommend longer fasts for major surgeries or colorectal approaches.

The observation that patients who experienced the longest fasts were also the ones who manifested more events of food complications corroborates the studies that attest to the reduction of nausea, vomiting, dizziness, and discomfort as a result of the abbreviation of perioperative fasting[6,9,14,23]. It also alerts to the care and provision of the quality of the patient's hospitalization, that is, the promotion of quality of life also during hospitalization, causing positive impacts on the patient, the team, and the institution providing the assistance[10,13,26].

Although there was an introduction to discussing with the care team in the head and neck surgery ward about the abbreviation of fasting in the period in which the research was carried out, it should be noted that the hospital did not exercise institutional protocols for shorten perioperative fasting until the end of the present study.

It is also emphasized that the reality found is not uncommon in the Brazilian territory. In a similar study carried out with digestive surgery patients admitted to a Brazilian university hospital[29], researchers found preoperative fasting periods for solids and liquids of 16.50 and 15.75 hours, respectively, and 15.67 hours of postoperative fasting. In general, they are still quantitatively lower than the situation described by our study.

The wide variation in fasting time found in the present study is, unfortunately, consistent with the Brazilian scenario described in a pioneering study by Aguilar-Nascimento *et al.*[17] who indicated a variation in preoperative fasting time of 2–216 hours, even higher in Brazilian hospitals that adhere to the traditional 6–216-hour fasting protocol. This emphasizes the administrative delays caused by the health institution where the present investigation was carried out.

On a global scale, despite the discussions and evidence about the updating of fasting behaviors, as in the study carried out in the United States30 in an approach to 431 oral and maxillofacial surgeons, it was observed

that 99.1% of the participants did not adopt the guidelines of the American Society of Anesthesiologists and, in private practice, prescribed prolonged fasts. Despite this, the existence of similarly serious realities does not attenuate the complexity of the situation of food and nutritional insecurity, as well as the harm to the safety and health of cancer patients subjected to a lack of standardized care in a period surrounded by expectations and fragility.

The adoption of fasting abbreviation protocols, as described in the ACERTO Project (Acceleration of Postoperative Total Recovery), in the oncological context, has an institutional and individual impact, promoting the reduction of surgical stress, the rapid recovery of postoperative physiological function, lower rate of morbidity and mortality, lower cost, and lesser hospital stay[7,16,22].

Namely, the main limitation of the present study is the small number of participants, even smaller due to the cancellation of surgeries. The number of participants limited the analytical possibilities applied. Thus, tests of greater sensitivity and adequacy were chosen for the reduced sample size. Another limitation concerns the assessment of food intake reported by the patient. Although it may be more reliable than an isolated analysis of the health center's planned menu, it is under the influence of biases in the interviewee's report. To minimize this effect, a conference of information was carried out between the report and the health center's menu in order to identify inconsistencies in the report. For further research, quantitative and qualitative analysis of pre- and post-fasting meals is suggested to address effective food consumption more fully. However, this work could apply to the reality of other small institutions that have not yet implemented situational diagnosis processes and could promote real reports that would introduce them to this topic.

CONCLUSION

The food and water fasting to which oncological patients were submitted, in the perioperative context, was too prolonged and their application did not take into consideration the determinant characteristics of nutritional risk such as age group, pre- and post-fasting dietary offer, food complications, and discomfort due to hunger and thirst. This prolonged fasting needs to be questioned as it exposes patients to a situation of food and nutritional insecurity proposed and maintained under constant professional assistance. In this sense, food and nutrition security must be managed as a right to be preserved in the hospital environment through institutional adherence to multimodal fasting abbreviation protocols and through the acceleration of efficient, humanized, and integral surgical recovery.

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Material suplementar:

Questionário desenvolvido e aplicado na pesquisa 'Insegurança alimentar e nutricional no perioperatório do paciente oncológico cirúrgico'

SEGURANÇA ALIMENTAR NO PERIOPERATÓRIO DE PACIENTES COM CÂNCER DO TRATO GASTROINTESTINAL ATENDIDOS EM UM HOSPITAL DE REFERÊNCIA EM ONCOLOGIA

RESIDÊNCIA MULTIPROFISSIONAL EM ONCOLOGIA HCP/IMIP

FORMULÁRIO DO PACIENTE ONCOLÓGICO CIRÚRGICO FORM

Enfermaria/LEITO:_____/_____ ENFER

***Paciente/Registro:**_____ REGIS

Data da entrevista I: ___/___/____ **Horário de início da entrevista I:** ___:____h.

Cidade de procedência: _____ **Idade:** _____ anos IDADE

Escolaridade: 1. Analfabeto 2. Ens. Fundamental 3. Ens. Médio 4. Ens. Superior ESCO

Sexo: 1. Feminino 2. Masculino SEXO

1) Comorbidades:

1. HAS 2. DM 3. HAS+DM 4. NEGA COMOR

***2) Diagnóstico/Hipótese diagnóstica (localização do tumor):**_____

***3) Procedimento cirúrgico proposto para o qual deu-se o internamento:**

_____

***4) Prescrição médica quanto à dieta/Orientação de jejum:**_____

5) Data e horário da última refeição antes do início do jejum: ___/___ ____:____h.

6) O que foi consumido na última refeição antes do início do jejum:

_____

7) Perfil de composição da última refeição consumida antes do jejum:

1. Predominantemente glicídica 2. Predominantemente proteica MACROPRE

3. Predominantemente lipídica

8) Data/hora da última ingesta de água: ___/___ ____:____h.

9) Fome:

1. Presente 2. Ausente FOMEPRE

10) Sede:

1. Presente 2. Ausente SEDEPRE

11) Ocorrência de intercorrência alimentar:

1. Náusea 2. Êmese 3. Tontura 4. Astenia 5. NEGA INTALIPRE

12) Preferiria que fosse permitido comer/beber antes da cirurgia:

1. Sim 2. Não PREFPRE

*Informações a serem coletadas no prontuário do (a) paciente.

Obs: quando não respondida ou não realizada a pergunta, preencher com o código "99".

Material suplementar:

Questionário desenvolvido e aplicado na pesquisa 'Insegurança alimentar e nutricional no perioperatório do paciente oncológico cirúrgico'

SEGURANÇA ALIMENTAR NO PERIOPERATÓRIO DE PACIENTES COM CÂNCER DO TRATO GASTROINTESTINAL ATENDIDOS EM UM HOSPITAL DE REFERÊNCIA EM ONCOLOGIA

RESIDÊNCIA MULTIPROFISSIONAL EM ONCOLOGIA HCP/IMIP

Data da entrevista II: ___/___/____ Horário de início da entrevista II: ___:____h.

***13) Horário de início do procedimento cirúrgico: ___:___h.**

14) Tempo total entre o início do jejum e o procedimento cirúrgico:__:___h JEJUMPRE

15) Tempo total entre a última ingesta de água e o procedimento cirúrgico:__:___h

***16) Horário de saída da Sala de Recuperação Anestésica: ___:___h.**

***17) Horário de retorno à enfermaria de origem: ___:___h.**

***18) Prescrição médica quanto à dieta/liberação de dieta:_____**

***19) Procedimento cirúrgico realizado:**

_____

***20) Tipo de anestesia administrada:_____**

21) Data e horário da 1ª refeição após o jejum: ___/___ ____:____h.

22) O que foi consumido na 1ª refeição após o jejum:

_____

23) Perfil de composição da 1ª refeição consumida após o jejum: MACROPOS

1. Predominantemente glicídica 2. Predominantemente proteica
3. Predominantemente lipídica

24) Data e horário da primeira ingesta de água após o jejum: ___/___ ____:____h.

25) Tempo total entre o retorno à enfermaria e a 1ª refeição após jejum:___:___h

JEJUMPOS

26) Tempo total entre o retorno à enfermaria e a 1ª ingesta de água após jejum:___:___h

27) Fome:

1. Presente 2. Ausente FOMEPOS

28) Sede:

1. Presente 2. Ausente SEDEPOS

29) Ocorrência de intercorrência alimentar:

1. Náusea 2. Êmese 3. Tontura 4. Astenia 5. NEGA INTALIPOS

30) Preferiria que fosse permitido comer/beber logo após a cirurgia:

1. Sim 2. Não PREFPOS

*Informações a serem coletadas no prontuário do (a) paciente.

Obs: quando não respondida ou não realizada a pergunta, preencher com o código "99".