

## EVALUATION OF THE EFFECTS OF PROLONGED FURNITURE PRIOR TO AND AFTER OPERATING

Avaliação dos efeitos do jejum prolongado no pré e pós-operatórios

Evaluación de los efectos del jejum prolongado en el pré y post operatorios

Ana Cristina Silva Pinto<sup>1</sup>; Rosiane Santos Ferreira<sup>2\*</sup>; Priscilla Manhães Gomes<sup>3</sup>; Lidiane Bonin de Andrade<sup>4</sup>; Janaína de Medeiros Tavares<sup>5</sup>

### How to quote this article:

Pinto ACS, Ferreira RS, Gomes PM, *et al.* Evaluation of the effects of prolonged furniture prior to and after operating. Rev Fun Care Online. 2021. Jan./Dec.; 13:1161-1166. DOI: <http://dx.doi.org/10.9789/2175-5361.rpcf.v13.9057>

### ABSTRACT

**Objective:** To investigate prolonged fasting in patients who underwent abdominal and gastrointestinal surgical procedures with general anesthesia, and possible complications in the pre, intra and postoperative periods.

**Method:** an exploratory-descriptive study, with retrospective-documental cross-section and qualitative-quantitative approach, performed at a Federal Hospital of *Rio de Janeiro*, with documentary analysis from January 2013 to April 2018. **Result:** there was a great variation in time of preoperative fasting, with 0.3% of patients fasted for up to 8 hours and 11.3% for up to 12 hours, some cases reaching more than 24 hours fasting.

**Conclusion:** Patients were found to be in perioperative fasting far beyond the stipulated safety standards, generating complications that cause discomfort to the patient, impair rehabilitation, increase length of hospital stay, and burden the system.

**Descriptors:** Fasting, Nursing, Perioperative care, Operative surgical procedures, Nursing research.

<sup>1</sup> Doctorate in Nursing from the Anna Nery School of Nursing - UFRJ. Adjunct Professor II at the Federal University of the State of *Rio de Janeiro*, Department of Medical-Surgical Nursing, Alfredo Pinto School of Nursing - UNIRIO *Rio de Janeiro - RJ - Brazil*

<sup>2</sup> Specialization in clinical and surgical medicine from the Federal University of the State of *Rio de Janeiro. São Gonçalo - RJ - Brazil*

<sup>3</sup> Specialization in clinical and surgical medicine from the Federal University of the State of *Rio de Janeiro. São Gonçalo - RJ - Brazil*

<sup>4</sup> Specialization in clinical and surgical medicine from the Federal University of the State of *Rio de Janeiro. Rio de Janeiro - RJ - Brazil*

<sup>5</sup> Graduation in Nursing from the State University of Campinas (1996). She is currently a nurse at the Hospital dos Servidores of the State of *Rio de Janeiro. Rio de Janeiro - RJ - Brazil*

## RESUMO

**Objetivo:** Investigar o jejum prolongado em pacientes que submeteram-se a procedimentos cirúrgicos abdominais e do trato gastrointestinal com uso de anestesia geral, e as possíveis complicações no pré, intra e pós-operatório.

**Método:** um estudo exploratório-descritivo, com recorte transversal retrospectivo-documental e abordagem quali-quantitativa, realizado num Hospital Federal do Rio de Janeiro, com análise documental referente ao período de janeiro de 2013 a abril de 2018. **Resultado:** houve uma grande variação no tempo de jejum pré-operatório, 0,3% dos pacientes fizeram jejum até 8 horas e 11,3% até 12 horas, alguns casos chegaram a fazer mais de 24 horas de jejum. **Conclusão:** foi perceptível que dentre prontuários analisados, os pacientes permaneceram em jejum perioperatório muito superiores fora dos padrões de segurança estipulados, gerando intercorrências que causam desconforto ao paciente, prejudicam a reabilitação, aumentam o tempo de internação e oneram o sistema.

**Descritores:** Jejum, Enfermagem, Assistência perioperatória, Procedimentos cirúrgicos operatórios, Pesquisa em enfermagem.

## RESUMEN

**Objetivo:** Investigar el ayuno prolongado en pacientes que se sometieron a procedimientos quirúrgicos abdominales y del tracto gastrointestinal con uso de anestesia general, y las posibles complicaciones en el pre, intra y postoperatorio. **Método:** un estudio exploratorio y descriptivo, con recorte transversal retrospectivo y documental con el abordaje cuali y cuantitativo, realizado en un Hospital Federal de Rio de Janeiro, con análisis documental referente al período de enero de 2013 a abril de 2018.

**Resultado:** ocurrió una gran variación en el tiempo de ayuno preoperatorio, 0,3% de los pacientes hicieron ayuno hasta 8 horas y 11,3% hasta 12 horas, algunos casos llegaron a hacer más de 24 horas de ayuno. **Conclusión:** fue notable que entre los prontuarios analizados, los pacientes permanecieron en ayuno perioperatorio muy superiores fuera de los estándares de seguridad estipulados, generando intercorrencias que causan incomodidad al paciente, perjudican la rehabilitación, aumentan el tiempo de internación y el sistema.

**Descriptores:** Ayuno, Enfermeira, Asistencia perioperatoria, Procedimientos quirúrgicos operativos, Investigación en enfermeira.

## INTRODUCTION

Around the 1950s, when anesthetic techniques were still performed with chloroform, in order to prevent pulmonary complications associated with vomiting and aspiration of gastric content, preoperative overnight fasting 8 to 12 hours was routinely instituted before surgical procedures using anesthetic induction. The establishment of this routine guarantees gastric emptying and prevents broncho-aspiration during anesthetic induction. Mendelson was one of the pioneers to institute preoperative fasting when observing a group of pregnant women who, after general anesthesia, aspirated gastric contents during delivery, giving his name to this complication, Mendelson's Syndrome.<sup>1</sup>

Over the years, attempts have been made to improve fasting routines in order to avoid Mendelson's syndrome, and nursing has a fundamental role in preparing patients

in the preoperative period by performing a physical examination, guiding the removal of accessories, clothes, emptying of the bladder, body, capillary and oral hygiene, the removal of prostheses and especially regarding the preparation of fasting.

However, in some cases fasting has been noticeably extended. This excessive prolongation occurs for several reasons, including delayed start of surgery, changes in time or place of treatment, postponement to another period of the day or cancellation and delayed return of the diet, which makes it harmful for the patients, especially the elderly. The surgical experience ends up becoming traumatizing and negative, felt physically and mentally since the prolonged fasting increases the changes linked to the surgical fact.<sup>2</sup>

In a hospital environment, communication is severely impaired due to the high workload of the teams and interpersonal conflicts. The nurse, as a manager, needs to have communicative competence to manage interpersonal conflicts preventing stress that they generate and interfere with patient care.

Prolonged fasting is viewed negatively by some, as it carries some risks, including increased insulin resistance, loss of muscle and protein mass.<sup>1</sup> The ASA (American Society of Anesthesiologists)<sup>3</sup>, after reviewing studies, developed guidelines for preoperative fasting, which recommend: - Fasting for 2 hours: clear liquids without alcohol and with a little sugar; - Fasting for 4 hours: breast milk for newborns and infants; - Fasting for 6 hours: light diet and non-breast milk, and for children infant formula; - Fasting for 8 hours: fatty foods, fried foods and meats.

Currently, there are projects aimed at minimizing injuries, traumas and stresses resulting from surgical procedures and improving perioperative techniques. Worldwide, the European protocol ERAS (Enhanced Recovery After Surgery) of The European Society of Clinical Nutrition and Metabolism stands out, in which northern European doctors developed a multicentric project to support evidence-based medicine describing perioperative care with recommendations for patient care in various stages of the operative process.<sup>4</sup>

In Brazil, based on the ERAS protocol, the Acerto Project (Acceleration of Total Postoperative Recovery) was created. This project defines some preoperative prescription routines, such as nutritional support, reduction of the preoperative fasting period; intraoperative, such as the decrease in venous hydration and other fluids; and postoperative such as early feedback and restriction on the use of probes and drains. Through the implementation of the multidisciplinary protocol, they demonstrated the involvement of the services of general surgery, anesthesia, nutrition, nursing and physiotherapy, establishing a set of perioperative care aimed at improving the recovery of the surgical patient.<sup>4</sup>

From the context of prolonged fasting and the need to verify and discuss the occurrence of pre-, intra- and

postoperative complications, the present study aimed to investigate prolonged fasting in patients who underwent abdominal and gastrointestinal tract surgical procedures with the use of general anesthesia, and the possible complications in the pre, intra and postoperative period through the documentary analysis of those who were hospitalized in the general surgery sector and were already discharged.

## METHODS

This is an exploratory-descriptive study, with a cross-sectional retrospective using documentary, qualitative and quantitative approaches. Data collection took place between January and March 2019 at the Documentation and Medical Statistics Service of a Federal Hospital in Rio de Janeiro, in which the documents made available allowed the analysis of 1,382 General Surgery records ranging from January 2013 to April 2018, among which 610 medical records met the inclusion criteria: medical records of patients who underwent abdominal and the gastrointestinal tract surgical procedures using general anesthesia; patients who remained fasting more than 8 hours and did not perform the scheduled surgical procedure at the first moment, but later did so; patients who were discharged from the hospital and patients older than 18 years. The data were collected through an evaluation form consisting of 22 items.

The research followed the rules of Resolution 466/12; as well as Operational Norm 1/2013 both by the National Health Council and its complementary notes; thus guaranteeing confidentiality, secrecy and anonymity of the information provided. Data collection started after approval by the Research Ethics Committee of the Federal Hospital in question was received under number 3,039,912. We justify the need for this study due to the great gap that exists in the role played by health institutions and in the strong evidence proven and documented by several scientific studies that due to lack of communication between the teams, resistance and ignorance are not carried out, disregarding the principles of beneficence and non-maleficence.

## RESULTS

Of the 610 medical records of patients undergoing abdominal surgical and gastrointestinal tract procedures using general anesthesia analyzed, 75.1 (75.1%) were female, and 24.9 (24.9%) were male, with majority between 50 and 69 years in both sexes.

In relation to the surgical site, the gallbladder was the most frequently addressed organ in both sexes, however the female sex presented a higher percentage in relation to the male according to the data in **table 1**.

**Table 1** - Percentage of surgical procedures of the investigated subjects by gender. *Rio de Janeiro*, RJ, Brazil, 2019

SURGICAL AREA	FEMALE (%)	MALE (%)
Appendix	0,8	0
Spleen	0,5	0
Abdominal cavity	6,1	2,7
Colon	1,6	2,7
Duodenum and pancreas	0,2	0,6
Esophagus	0,6	0,8
Stomach and small intestine	1	0,6
Stomach	5,6	1,8
Liver	1,3	1,2
Liver and intestine	0,5	0,3
Ileus	0,5	0,6
Large intestine	0,5	2
Small intestine	0,2	0,3
Pancreas	0,3	0
Reconstruction of intestinal transit	1,8	0,6
Straight	1,8	0,6
Rectum and sigmoid	5,1	2,7
Gallbladder	46,7	7,4
Total	75,1%	24,9%

We highlight the absence of records from the teams regarding complications during the perioperative period (1,049), especially in the intraoperative period (567), which hinders arriving at a more reliable result of the research. Analyzing the complications resulting from fasting described in **Table 2**, there were reports of general malaise (517).

Preoperative cardiovascular changes (133) were reported related to anxiety due to the surgery and hunger due to prolonged fasting, and in many cases they remained in the postoperative period (159), such as hyper and hypotension, arrhythmia, tachycardia and bradycardia.

**Table 1** - Complications resulting from the fasting time before, during and after the surgery. *Rio de Janeiro*, RJ, Brazil, 2019

Complications resulting from the fasting	PRE	INTRA	POST	TOTAL
Cardiovascular changes	133	15	159	304
Metabolic changes	66	10	132	202
Respiratory changes	5	1	40	46
Seizure / spasm	0	1	3	4
Gastrointestinal discomfort	281	0	101	382
Dehydration	1	0	1	2
Pain in surgical site	1	0	31	32
Hunger	2	0	2	2
Inappetence	24	0	8	32
Insomnia	2	0	3	5
Hemodynamic instability	2	4	10	15
Emotional lability / anxiety	28	0	16	44
Generalized malaise	284	4	230	517
No report	231	567	251	1,049
Cardiorespiratory arrest	0	0	4	4
Weight loss	16	0	5	21
Infectious conditions	11	0	46	57
Lowering awareness level	4	0	9	13
Gastric reflux / regurgitation	5	0	6	11
Thirst	2	0	2	4
Somnolence	1	0	10	11
Total	1099	602	1069	2757

According to the evaluation of the fasting time stipulated by the medical team shown in **table 2**, there was no standard or average time adjusted by the teams for pre-anesthetic / surgical fasting, which can be observed in **table 3**, regardless of the surgical area. There was a wide

variation in the preoperative fasting time, in which three (3) patients fasted for up to 8 hours (0.5%) and 69 did it for up to 12 hours (11.3%), in some cases even doing more than 24 hour fasting.

**Table 2** - Fasting time stipulated by the medical team in the preoperative period. *Rio de Janeiro*, RJ, Brazil, 2019.

Fasting time	N	%
8h	272	44,6
>8h	151	24,8
10h	7	1,1
>10h	3	0,5
12h	172	28,2
>12h	1	0,2
Not reported	4	0,6
Total	610	100

**Table 3** – Distribution of pre-surgery fasting time in hours. *Rio de Janeiro*, RJ, Brasil, 2019

Pre-surgery fasting time in hours	N	%	Total hours	Average hours
8h - 8h59min	3	0,5	25h 30m	08h 30min
9h - 9h59min	18	2,9	173h 05min	09h 36min
10h - 10h59min	129	21,1	1343h 05min	10h 24min
11h - 11h59min	90	14,7	1015h 09min	11h 16min
12h - 12h59min	69	11,3	857h 51min	12h 25min
13h - 13h59min	51	8,4	682h 33min	13h 23min
14h - 14h59min	49	8	707h 55min	14h 26min
15h - 15h59min	55	9	849h 24min	15h 26min
16h - 16h59min	40	6,5	657h 05min	16h 25min
17h - 17h59min	26	4,3	452h 20min	17h 23min
18h - 18h59min	34	5,6	623h 20min	18h 20min
19h - 19h59min	15	2,5	289h 33min	19h 18min
20h - 20h59min	4	0,6	81h 15min	20h 18min
21h - 21h59min	4	0,6	86h 51min	21h 42min
22h - 22h59min	2	0,3	44h 20min	22h 10min
23h - 23h59min	1	0,2	23h	23h
34h - 34h59min	1	0,2	34h 30min	34h 30min
36h - 36h59min	1	0,2	36h 40min	36h 40min
38h - 38h59min	1	0,2	38h 25min	38h 25min
60h - 60h59min	1	0,2	60h 20min	60h 20min
84h - 84h59min	1	0,2	84h 40min	84h 40min
150h - 150h59min	2	0,3	300h	150h
817h - 817h59min	1	0,2	817h	817h
No data	5	0,8	-	-
Emergency	6	1	-	-
Death	1	0,2	-	-
Total	610	100	9283h 51min	1475h37min

Based on the medical records analyzed, we observed that the reintroduction of the diet within 24 hours (77%) occurred beyond the recommended recommendations (12-24 hours). Despite this, when analyzing the fasting time in hours, we found patients with an average of 153 fasting hours and 06 minutes (**Table 4**).

**Table 4** - Distribution of postoperative fasting time variables in hours. *Rio de Janeiro*, RJ, Brazil, 2019.

Post-surgery fasting times	N	%	Total hours	Average gours
1min - 10h	376	61,6	1375h 52min	3h 39min
11h - 20h	94	15,4	1472h 32min	15h 39min
21h - 30h	8	1,3	190h 45min	23h 50min
31h - 40h	39	6,4	1488h 43min	38h 10min
41h - 50h	24	4	1012h 41min	42h 11min
51h - 60h	2	0,3	116h 20min	58h 10min
61h - 70h	35	5,7	2259h 01min	64h 32min
71h - 80h	2	0,3	156h 02min	78h 01min
81h - 90h	9	1,5	7840h 07min	87h 07min
91h - 100h	1	0,2	91h 15min	91h 15min
Acima de 101h	13	2,1	1990h 23min	153h 06min
Sem dados	1	0,2	-	-
Óbitos	6	1	-	-
Total	610	100	16981h	665h 40min

## DISCUSSION

The surgical patient is very vulnerable both due to the intervention that will be performed and to the changes that may occur during the process. Prolonged fasting causes great discomfort to the patient, causing anxiety and agitation before surgery, resulting in metabolic changes such as insulin resistance resulting in hyperglycemia and also a decrease in insulin in peripheral tissues which makes glucose uptake difficult, consequently affecting recovery, increasing the length of stay.<sup>5</sup> Therefore, it is important that the entire nursing team is prepared to ensure the safety, comfort and well-being of this patient, ensuring quality health care.

The patient who has fasted for a long time becomes more susceptible to infections, as metabolic changes occur with a decrease in caloric intake that leads to malnutrition, increasing the difficulty of the inflammatory response and the weakening of the immune system. Fasting for more than 12 hours causes significant cardiovascular and blood pressure changes. Depletion occurs in the intravascular volume due to compartmental imbalance with a reduction of about one liter of liquid and the body does not stop, the elimination of fluids continues through breathing, sweating, salivation and other functions. With this, the body activates several mechanisms in an attempt to balance and mitigate the symptoms of fluid loss that, associated with changes caused by the drugs used in general anesthesia, can lead to complete hemodynamic imbalance.<sup>6</sup>

In relation to the postoperative period, early feeding between 12 - 24 hours improves the patient's well-being and plays an important role in the postoperative recovery process, accelerating the healing. In addition, the psychological factor of food deprivation must also be considered. When it comes to costs, early feeding should be considered as a reduction factor, since patients who eat early tend to have shorter hospital stays, making the system less burdensome.<sup>7-8</sup>

According to Ortolon, Kovalski, Belonci and Ferreira<sup>9</sup>, the conventional night fast, commonly called “nothing by mouth”, accentuates the symptoms of thirst, dehydration, weakness, hunger, irritability and anxiety in the postoperative period. Thirst is often reported by patients, causing great discomfort, irritability and anxiety, but it is a symptom little valued by the teams, with few records.<sup>10</sup>

It has become more and more noticeable that patients are fasting longer and longer, with different time than what was prescribed in the pre- and postoperative periods, which ends up being overlooked by professionals<sup>2-11</sup>, exposing the need for medical professionals to readjust the new policies and protocols established worldwide.

There are currently fasting recommendations for different types of food, as they differ in both digestion and absorption. The ASA (American Society of Anesthesiologists)<sup>3</sup> recommends fasting for up to 2 hours for clear, residue-free liquids, up to 6 hours for light meals



and up to 8 hours for meat and fatty foods.

Thinking about ways to minimize the aggravations caused by prolonged fasting and accelerate the postoperative recovery, the ACERTO Project (Acceleration of Total Postoperative Recovery) was implemented in Brazil. It considers several aspects of the care of the surgical patient as the restriction regarding the use of nasogastric tube and drains, early ambulation, abbreviation of preoperative fasting, early return of the postoperative diet and restriction of venous hydration.<sup>1</sup>

The ACERTO Project recommends as a way to shorten fasting time the intake of liquid enriched with maltodextrin, a carbohydrate that helps to reverse insulin resistance caused by surgical trauma<sup>1</sup>, and also has a beneficial psychological factor in reducing anxiety and hunger caused by fasting.

According to Campos, Barros-Neto, Guedes and Moura<sup>12</sup>, patients who ingested a carbohydrate-based drink in the preoperative period avoided the occurrence of two or more symptoms involving the gastrointestinal tract, including abdominal distension and vomiting. Drinking fluids in the preoperative period is beneficial for the patient because, in addition to preventing malnutrition, it also prevents thirst.

The Brazilian Society of Parenteral and Enteral Nutrition in association with the Brazilian Association of Nutrology, developed a draft guideline to assist physicians on the approach to better nutritional therapy for patients in the perioperative period. This project aims to reduce cases of malnutrition in surgical patients, as it causes complications in the postoperative period and death. They recommend 7 to 14 days of preoperative nutritional therapy for patients at greater risk of malnutrition, who will undergo medium and large surgeries and the reintroduction of the diet as early postoperatively as possible, between 12 and 24 hours after surgery.<sup>7</sup>

## CONCLUSIONS

In a hospital environment, communication is severely impaired due to the high workload of the teams, inflexibility and interpersonal conflicts. Managing these conflicts requires the nurse to act as a manager, have knowledge and the ability to communicate, that is, to develop communicative competence, thus preventing these conflicts from generating stress and interfering with care.

It is possible to observe failures in communication between the teams, which consequently bring inconvenience to hospitalized patients, especially in relation to the pre-established fasting period that is inconsistent with current protocols; the lack of standardization for the beginning and end of the fasting time that does not take into account the conditions of the patients and / or studies; the prolonged fasting due to cancellation of procedures or surgeries; the length of hospital stay thus avoiding the complications identified in the present study for the patient's physical and

mental well-being.

The medical records analyzed indicate that the patients remained on perioperative fasting far longer than safety standards stipulate, generating complications that cause discomfort to the patient, impair rehabilitation, increase the length of hospital stay and burden the system. We suggest that new practices be adopted by the multidisciplinary team of the research hospital in question in the service's routines, thus changing conservative behaviors with the implementation of current protocols and bringing the entire health team of the patient during hospitalization, in addition to the patient and his family. May new studies emerge to improve our clinical management.

## REFERENCES

1. Silva AH, Miguez BB, Oliveira AP, Ferreira JM. A importância da redução do tempo de jejum Pré-operatório: uma revisão literária. *Cad bras med.* [internet] 2019 [acesso em: 14 de maio de 2019]; 2 (2). Disponível em: <http://www.revista.unifeso.edu.br/index.php/cadernosdemedicinaunifeso/article/view/1389/604>
2. Pierotti I, Nakaya TG, Garcia AKA, Nascimento LA, Conchon MF, Fonseca FL. Avaliação do tempo de jejum e sede no paciente cirúrgico. *Rev baiana enferm.* [internet] 2018 [acesso em: 14 de maio de 2019]; 32:e27679. Disponível em: <https://portalseer.ufba.br/index.php/enfermagem/article/view/27679/17307>
3. American Society of Anesthesiologists (ASA). Practice Guidelines for Preoperative Fasting and the Use of Pharmacologic Agents to Reduce the Risk of Pulmonary Aspiration: Application to Healthy Patients Undergoing Elective Procedures. *Anesthesiology.* [internet] 2017 [acesso em: 14 de maio de 2018]; 126: 376-93. Disponível em: <http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2596245>.
4. Marcarini M, Rosa SC, Wieck FP, Betti AH. Abreviação do Jejum em Pacientes Submetidos à Cirurgia Cardíaca. *Braspen J.* [internet] 2017 [acesso em: 14 de maio de 2019]; 32 (4): 375-9. Disponível em: <http://arquivos.braspen.org/journal/out-dez-2017/13-Abrevisacao-do-jejum.pdf>.
5. Martins AJC, Serva CAS, Fonseca TH, Martins MJL, Poveda VB. Jejum Inferior a Oito Horas em Cirurgias de Urgência e Emergência Versus Complicações. *Rev Bras Enferm.* [internet] 2016 [acesso em: 09/03/2018]; 69(4): 712-7. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0034-71672016000400712](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672016000400712).
6. Alves DR, Ribeiras R. O Jejum Influencia a Responsividade à Pré-carga em Voluntários ASA I e II? *Rev Bras Anesthesiol.* [internet] 2017 [acesso em: 14 de maio de 2019]; 67(2):172-179. Disponível em: [http://www.scielo.br/pdf/rba/v67n2/pt\\_0034-7094-rba-67-02-0172.pdf](http://www.scielo.br/pdf/rba/v67n2/pt_0034-7094-rba-67-02-0172.pdf)
7. Nascimento JEA, Campos AC, Borges A, Correia MITD, Tavares GM. Terapia Nutricional no Perioperatório. *Projetos Diretrizes de Terapia Nutricional. Rev Assoc Med Bras.* [internet] 2011 [acesso em: 10/03/2018]. Disponível em: [https://diretrizes.amb.org.br/\\_BibliotecaAntiga/terapia\\_nutricional\\_no\\_perioperatorio.pdf](https://diretrizes.amb.org.br/_BibliotecaAntiga/terapia_nutricional_no_perioperatorio.pdf).
8. Nunes FLS, Gadelha PCFP, Costa MDS, Amorim ACR, Lima KVG, Silva MGB. Tempo de Jejum Perioperatório Versus Tempo de Permanência Hospitalar e Complicações Pós Operatórias em Pacientes Submetidos a Cirurgias do Trato Gastrointestinal e de Parede Abdominal. *Nutr clín diet Hosp.* [Internet] 2015 [acesso em:14 de maio de 2019]; 35(2): 35-40 DOI: 10.12873/352dasnunes. Disponível em: <http://revista.nutricion.org/PDF/352dasnunes.pdf>.
9. Ortolon GL, Kovalski MG, Belonci CGC, Ferreira VA. Análise do Tempo de Jejum Pré-Operatório em Cirurgias Eletivas do Hospital Universitário de Ponta Grossa – PR. *Rev Méd Paraná.* [internet]. 2017 [acesso em:21 de maio de 2019]; 76(2):33-38. Disponível em: [http://www.amp.org.br/site/arquivos/revistasarquivos/revista-medica-do-parana-volume-76-n-2-julho-dezembro-2018\\_1539876548.pdf#page=33](http://www.amp.org.br/site/arquivos/revistasarquivos/revista-medica-do-parana-volume-76-n-2-julho-dezembro-2018_1539876548.pdf#page=33).

10. Aroni P, Ribeiro RP, Fonseca LF. Elaboração e Validação de Escala de Avaliação da Sede no Paciente Cirúrgico: nota prévia. *Semina cienc bio saude*. 2015; 36(1): 311-316.
11. Francisco SC, Batista ST, Pena GG. Jejum em Pacientes Cirúrgicos Eletivos: comparação entre o tempo prescrito, praticado e o indicado em protocolos de cuidados perioperatórios. *ABCD arq bras cir dig*. 2015; 28(4): 250-254.
12. Campos SBG, Barros-Neto JA, Guedes GS, Moura FA. Jejum Pré-operatório: por que abreviar? *ABCD arq bras cir dig*. [internet] 2018 [acesso em: 14 de maio de 2019]; 31(2):e1377. DOI: /10.1590/0102-672020180001e1377. Disponível em: [http://www.scielo.br/pdf/abcd/v31n2/pt\\_0102-6720-abcd-31-02-e1377.pdf](http://www.scielo.br/pdf/abcd/v31n2/pt_0102-6720-abcd-31-02-e1377.pdf).

Received on: 28/05/2019  
Required Reviews: 25/10/2019  
Approved on: 03/02/2020  
Published on: 14/06/2021

**\*Corresponding Author:**

Rosiane Santos Ferreira  
Rua Zelindo Moura, nº 77 sobrado  
Rocha, São Gonçalo, Rio de Janeiro, Brasil  
E-mail: [rosianesantof@gmail.com](mailto:rosianesantof@gmail.com)  
Telephone: +55 (21) 9 94366462  
CEP: 24.420-570

The authors claim to have no conflict of interest.