

## Investigation of constipation condition of surgical patients

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### ABSTRACT

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**Purpose:** The study was planned to examine the constipation condition of surgical patients.

**Materials and methods:** The universe of this descriptive study consisted of patients who underwent surgery between May 2016 - 2017 in a university hospital general surgery clinic. Patients (n=57) who were operated on this clinic at the specified dates and agreed to participate in the study constituted the sample of the study. A questionnaire about the identity information of the patients and Constipation Risk Assessment Scale are used collecting the data. A written permission was obtained from the Scientific Ethics Board and the institution where the study was conducted for the investigation to be carried out. The data was evaluated in numbers and percentage in SPSS 16.0 software package.

**Results:** The mean age of the patients was 53.43±12.75 years and 63.2% of them were female. When the defecating of the patients was examined in accordance with the ROME III constipation diagnoses criteria, it was determined that the 24.6% of the patients had one, 15.8% of them had two and 7.0% of them had three of the criteria. The mean score of the Constipation Risk Assessment Scale of the patients was found to be 8.49 points. When the scale scores of the patients were examined, it was seen that 73.7% had <10 low risk, 19.3% 11-15 moderate risk and 7.0% >16 high risk group.

**Conclusions:** Some of the patients were found to have constipation problems, and patients were also seen in the middle and high-risk groups according to the results of the risk assessment scale.

**Keywords:** Constipation, general surgery, nursing

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## INTRODUCTION

Constipation is one of the common problems affecting individuals' quality of life [1] and is a subjective symptom. It can vary from person to person and can be interpreted in different ways [2]. Generally, two or fewer defecation habits per week are indicated as constipation, but the number alone is not an adequate criterion. The number and amount of defecation varies between individuals and in different societies. In individuals with rare defecation habits, the feces stay longer in the intestines, and therefore the water in the feces is absorbed more and the stool hardens [3,4]. The criteria of ROME I by 1989, ROME II by 1999 and ROME III by 2006 were developed for a standard definition of constipation. Its existence since three months and started at least six months ago are considered constipation of less than three bowel movements and defecations per week, at least 25% of the stools are composed of hard stool, there is a feeling of not being able to fully empty the stool, there is complete congestion, excessive strain, hand support for defecation, and inadequate access to a soft bowel movement according to the ROME III criteria [5,6,7].

The purpose of care in the process that starts with the patient's departure from the operating room and continues until his discharge is to maintain the vital functions of the patient, to prevent complications and to return to daily life [8]. Constipation after surgery is one of the common problems. Constipation can cause many additional problems (anal fissure, intestinal obstruction, hemorrhoids, etc.) in patients, it also increases the length of hospital stay and increases the cost. Constipation is a preventable problem with appropriate nursing approaches. Evaluation of constipation is important for nursing approaches in surgical clinics [5]. The study was conducted to examine the constipation status of surgical patients for this reason.

## MATERIALS AND METHODS

The study used a descriptive research design. The research was carried out in a university hospital general surgery clinic. Patients who had surgery between May 2016 and 2017 were the population of the study. Patients (n=57) who had surgery on the dates specified in the general surgery clinic and were willing to participate in the study constituted the sample. Patients with complicated abdominal surgery, colostomy, or ileostomy, who could not be fed orally, who were under 18 years of age, and who did not have surgery were not included in the study.

The data were collected by introductory information questionnaire (21 questions) and the "Constipation Risk Assessment Scale". The

questionnaires were applied to the inpatients by face-to-face interview method on the second day after the operation.

Constipation Risk Assessment Scale: The Turkish validity and reliability study of the scale developed by Richmond and Wright in 2005, Koca Kutlu et al. [9] made by.

The scale consists of four parts (lifestyle, hospital conditions, physiological and psychological status, medications). At the end of each section, the total score of the department and the scale total score at the end of the scale are obtained and the constipation risk group of the patient is determined according to the result. According to the answers given by the patient, the risk of constipation increases as the score it gets increases.

Low risk for constipation: score <10

Moderate risk for constipation: score 11-15

High risk for constipation: score >16

Cronbach's value for the constipated respondents was  $r=61.9$  [9].

The data were evaluated as numbers and percentages by using statistical package program (SPSS 16.0) on computer.

Written permission was obtained from Kutlu for the use of the scale, from the Faculty of Nursing Scientific Ethics Committee for conducting the research, from the hospital where the research was to be conducted. Verbal consent was obtained from the patients participating in the study after they were informed about the study.

The study was carried out in accordance with the principles of the Helsinki Declaration.

## RESULTS

The socio-demographic findings of the patients are shown in Table 1. The average age of the patients included in the study was  $53.43 \pm 12.75$  (min = 23; max = 75), and 56.1% had chronic disease and 50.9% had surgery experience.

It was found that 10.5% of the patients were diagnosed with constipation. It was determined that 54.4% of the patients regularly performed their daily feces, 63.2% in the morning and 91.3% did not have a special application (eg: reading newspaper) during defecation.

It was seen that 22.8% of the patients answered yes to the question of whether you have constipation.

The distribution of the defecation characteristics of the patients according to constipation diagnosis criteria (ROME III) can be seen in Tables 2 and 3.

It was seen that 7.0% were in the high-risk group, 19.3% were in the medium-risk group, 73.7% were in the low-risk group and the mean score was 8.49 points considering the distribution of the scores of the constipation risk assessment scale of the patients (Table 4).

**Table 1.** Distribution of patients according to sociodemographic findings

Sociodemographic Data	Number	Percent
<b>Gender</b>		
Female	36	63.2
Male	21	36.8
<b>Marital Status</b>		
Married	46	80.7
Single/Widowed	11	19.3
<b>Education Status</b>		
Not literate	4	7.0
Literate	5	8.8
Primary education	22	38.6
Secondary	18	31.6
High education	8	14.0
<b>Income Status</b>		
Income<Expense	7	12.3
Income=Expense	49	86.0
Income>Expense	1	1.7
<b>Total</b>	<b>57</b>	<b>100.0</b>

**Table 2.** Distribution of patients by ROME III constipation criteria

ROME III Constipation Criteria	Yes		No		Total	
	Number	%	Number	%	Number	%
Straining during at least 25% of defecations	15	26.3	42	73.3	57	100.0
Lumpy or hard stools in at least 25% of defecations	10	17.5	47	82.5	57	100.0
Sensation of incomplete evacuation for at least 25% of defecations	6	10.5	51	89.5	57	100.0
Sensation of anorectal obstruction/ blockage for at least 25% of defecations	3	5.3	54	94.7	57	100.0
Manual maneuvers to facilitate at least 25% of defecations (eg, digital evacuation, support of the pelvic floor)	2	3.5	55	96.5	57	100.0
Fewer than 3 defecations per week	6	10.5	51	89.5	57	100.0

**Table 3.** Distribution of ROME III constipation criteria according to total number of markings

Number of Marked Items	Number	Percent
1 items	14	24.6
2 items	9	15.8
3 items	4	7.0
No problem	30	52.6
<b>Total</b>	<b>57</b>	<b>100.0</b>

**Table 4.** Distribution of patients' constipation risk assessment scale scores by risk status

Risk Status	Number	Percent
<10 Low Risk	42	73.7
11-15 Medium Risk	11	19.3
>16 High Risk	4	7.0
<b>Total</b>	<b>57</b>	<b>100.0</b>

## DISCUSSION

Constipation is a subjective symptom that differs from person to person. In constipation, which is generally known as two or fewer defecations per week, the number alone is not sufficient as a criterion. The number and amount of defecation varies from individual to individual and from society to society. Although the number of defecation is normal, individuals may have difficulty in defecation, troublesome and restless, solid-hard and small amount of stool removal [2,3]. It is stated that constipation is seen in 2-28% of people depending on demographic factors, sampling and definition [1,6,7]. It was observed that half of the patients defecate every day and approximately two-thirds defecate in the morning and 14% in the afternoon and evening as a result of the study. The scale mean score of the patients included in the study was 8.49 and although the majority were in the low-risk group, it was observed that there were patients in the medium-risk (19.3%) and high-risk (7.0%) groups. The mean score of the Constipation Risk Assessment Scale of the patients was found to be  $5.1 \pm 2.1$  in the study of Arı and Yılmaz in 2016 [10]. The average score of the Constipation Risk Assessment Scale was determined as  $12.98 \pm 4.84$  (medium risk) in the studies in which Ucuzal and Aldanmaz evaluated postoperative constipation risk in general surgery patients in 2015 [5]. The mean score of the Constipation Risk Assessment Scale was found to be  $11.71 \pm 7.81$  in the studies of Çelik et al. evaluating the risk of constipation in patients undergoing abdominal surgery [11]. The scores with the same scale were found to be  $7.01 \pm 3.48$  on admission to the hospital,  $9.96 \pm 3.04$  on the third surgery day, and  $9.43 \pm 3.17$  on discharge in the study conducted by Kaya et al. with neurosurgery patients in 2013 [12]. In the studies examined, it was observed that the risk of constipation was at medium and low risk, and in this study it was at low risk. It is thought that this difference may be due to patients undergoing different surgical interventions included in the study.

It is accepted as constipation that at least two criteria have existed for three months and started at least six months ago according to ROME III criteria [6,7]. The 15.8% of patients had two criteria, 7.0% had three criteria and 24.6% had one criterion

in the study. The results show that almost a quarter of the patients have constipation problems since patients who have two or more criteria according to the ROME criteria are considered constipated. It was seen that one of the ROME III criteria was present in approximately half of the patients and it was found to have the criterion of "straining during at least 25% of defecations" in the study. This means that at least 25% of the defecations are excreted with lumpy or hard stools, at least 25% of the defecations are sensation of incomplete evacuation, there is less than three defecations per week, at least 25% of the defecations are sensation of anorectal obstruction/blockage and at least the defecations are at least the defecations, 25% of them experienced the need for manual support for defecation. Symptoms of constipation include hard stool mass and less than three defecations per week, abdominal and rectal pain, decreased bowel sounds, rectal fullness, pressure to the rectum, stool during stress, full feeling, decreased appetite, fatigue, headache, and hemorrhoids [1]. The study also found that most of the symptoms existed. It was stated that 31.5% of patients had constipation in the preoperative period and at least 25% of their defecations were lumpy or hard stools in their study conducted by Arı and Yılmaz in 2016 [10]. In our country, the prevalence of functional comprehensive constipation was found to be 8.3% in a study conducted by Kasap and Bor with 3214 people from 20 provinces according to the ROME II criteria [13]. Constipation is a common problem that has a profound effect on patients' well-being and quality of life [6]. It is important that there are no constipation problems in order for patients to have a better recovery period for this reason.

In this study, having few number of samples and involvement of only one hospital limits generalization of the results.

## CONCLUSIONS

Some of the patients were found to have constipation problems. It was seen that there were moderate and high-risk patients when the risk conditions of constipation were evaluated. It is recommended to consider the risk situations of constipation when planning the care of patients.

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## Conflict of interest

The authors declare no conflict of interest.

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## REFERENCES

1. Turan N, Aşti TA. The Effect of Abdominal Massage on Constipation and Quality of Life. *Gastroenterol Nurs.* 2016 Jan-Feb;39(1):48-59.
2. Bengi G, Yalçın M, Akpınar H. Current Approach to Chronic Constipation. *Current Gastroenterology* 2014;18(1):72-88.
3. Yurdakul İ. Constipation. *Istanbul University Cerrahpaşa Faculty of Medicine Continuing Medical Education Activities* 2001;71-81.
4. Yurdakul İ. Chronic Constipation. *Istanbul University Cerrahpaşa Faculty of Medicine Continuing Medical Education Activities* 2007;58:43-58.
5. Ucuzal M, Aldanmaz N. Postoperative Constipation Risk in General Surgery Patients. *İnönü University Journal of Health Sciences* 2015;4(2):17-22.
6. Korkmaz M, Yüksel F, Ünalacak M, Ünlüoğlu İ. Primary Care Management of a Patient With Constipation. *Konuralp Medical Journal* 2011;3(3):35-41.
7. Longstreth GF, Thompson WG, Chey WD, Houghton LA, Mearin F, Spiller RC. Functional Bowel Disorders. *Gastroenterology* 2006;130:1480-91.
8. Fındık ÜY, Surgical Process: Postoperative Care and Prevention of Complications. Ed: Eti Aslan F. With Surgical Care Case Analysis. Ankara: Akademisyen Bookstore 2016;425-54.
9. Kutlu Koca A, Yılmaz E, Çeçen D, Eser E. The Reliability and Validity of the Turkish Version of The Constipation Risk Assesment Scale. *Gastroenterol Nurs.* 2011May;34(3):200-8.
10. Arı M, Yılmaz E. Impact of Pre-Operative Anxiety on Post-Operative Constipation. *Turk J Colorectal Dis* 2016;26:39-46.
11. Çelik S, Yalçın Atar N, Öztürk N, Mendes G, Kuytak F, Bakar E, Dalgıran D, Ergin S. Constipation Risk in Patients Undergoing Abdominal Surgery. *Iran Red Crescent Med J.* 2015 Jun;17(6):1-9.
12. Kaya H, Kaya N, Turan N, Şirin K, Güloğlu S. Identifying Constipation Risk in Neurosurgery Patients. *Pielęgniarstwo Neurologiczne i Neurochirurgiczne* 2013;2(3):96-103.
13. Kasap E, Bor S. Prevalence of Functional Intestinal Disease. *Güncel Gastroenteroloji* 2006;10(2):165-8.