

Information Requirements and Difficulties Experienced After Discharge in Day Surgery Patients: A Descriptive Cross-Sectional Survey

Günübirlik Cerrahi Hastaları Arasında Taburculuk Sonrasında Karşılaşılan Güçlükler ve Bilgilendirme Gereksinimleri: Tanımlayıcı Kesitsel Bir Çalışma

Dilek ÇİLİNGİR, MD,^a
Nurhan BAYRAKTAR^b

^aKaradeniz Technical University
Trabzon Health School,
Trabzon

^bHacettepe University Nursing School,
Ankara

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Yazışma Adresi/Correspondence:
Dilek ÇİLİNGİR, MD
Karadeniz Technical University
Trabzon Health School,
Trabzon,
TÜRKİYE/TURKEY
dilekcilingir1@yahoo.com

ABSTRACT Objective: Day surgery procedures have increasingly been used nowadays as a result of improvements in surgical techniques, anesthesia and analgesia techniques and they are preferred for their benefits to the patient and to the healthcare system. However, it is known that day surgery patients may face many problems in the perioperative period. This research was conducted to determine the difficulties experienced by day surgery patients and their information requirements. **Material and Methods:** The study was designed as a cross-sectional and descriptive survey. It was conducted in 2003 for a total of 12 months, with the participation of 230 patients who had surgery in urology, orthopedics, ear nose throat, ophthalmology, plastic surgery or general surgery clinics and were hospitalized in the day surgery unit of a university hospital in Ankara Province. Data were collected using "Patient's Personal Information and Knowledge Requirements" and "Difficulties Experienced After Hospital Discharge" forms. **Results:** The research results showed that day surgery patients had deficient knowledge regarding the day surgery process and they experienced problems after discharge at home especially within the first three postoperative days. Mainly, the problems were related to the surgical site and the respiratory, digestive, nervous, urinary and musculoskeletal systems. **Conclusions:** Day surgery patients experienced many problems in the postoperative period and their knowledge on the solution of these problems and the day surgery process was insufficient. Therefore, we recommend to give the patients and their relatives sufficiently detailed verbal and written information on the day surgery process.

Key Words: Ambulatory surgical procedures; postoperative complications

ÖZET Amaç: Günübirlik cerrahi prosedürleri cerrahi teknikler, anestezi ve analjezi tekniklerindeki gelişmeler sonucu günümüzde giderek artan şekilde kullanılmakta ve hastaya ve sağlık bakım sistemine olan yararları nedeniyle tercih edilmektedirler. Ancak, günübirlik cerrahi hastalarının perioperatif dönemde pek çok sorunla karşı karşıya kalabileceği bilinmektedir. Bu araştırma günübirlik cerrahi hastalarının yaşadığı güçlükleri ve onların bilgilendirme gereksinimlerini belirlemek için yapılmıştır. **Gereç ve Yöntemler:** Bu çalışma kesitsel ve tanımlayıcı bir çalışma olarak planlanmıştır. 2003 yılında toplam 12 aylık süre boyunca üroloji, ortopedi, kulak burun boğaz, göz, plastik cerrahi ve genel cerrahi kliniklerinde ameliyat edilip Ankara İli'ndeki bir üniversite hastanesinin günübirlik cerrahi ünitesinde yatan 230 hastanın katılımıyla yapılmıştır. Veriler, "Hastaların Kişisel Bilgilendirme ve Bilgi Gereksinimleri Formu" ve "Taburculuk Sonrası Yaşanan Güçlükler Formu" kullanılarak toplanmıştır. **Bulgular:** Araştırma sonuçları, günübirlik cerrahi hastalarının günübirlik cerrahi süreci ile ilgili eksik bilgi sahibi olduğunu ve taburculuk sonrası evde özellikle ilk üç gün içinde sorunlar yaşadıklarını göstermiştir. Sorunlar, çoğunlukla ameliyat bölgesi ve solunum, sindirim, sinir, üriner ve kas iskelet sistemleri ile ilgiliydi. **Sonuç:** Günübirlik cerrahi hastaları postoperatif dönemde pek çok sorun yaşadılar ve bu sorunları nasıl çözecekleri ve günübirlik cerrahi süreci konusundaki bilgileri yetersizdi. Bu nedenle, hasta ve hasta yakınlarına günübirlik cerrahi süreci konusunda yeterli sözlü ve yazılı ayrıntılı bilgi vermek önerilmektedir.

Anahtar Kelimeler: Günübirlik cerrahi işlemler; postoperatif komplikasyonlar

Day surgery refers to planned surgical interventions for patients who are preoperatively decided as suitable for day surgery and who may be discharged on the day of surgery. Day surgery is used in many conditions that require surgical interventions for diagnosis or treatment. Improvements of surgical techniques, anesthesia and analgesia techniques and asepsis have the development of day surgery.¹⁻⁴

Recently, day surgery procedures have increasingly been used for elective surgical procedures. In 1999, Twersky and Showan predicted that by 2005, 82% of all surgery in the USA would be carried out as day surgery.⁵ Currently, the government of UK is seeking to increase day surgery from 60-65% to 75% of all elective surgical procedures. In England, approximately, 60-80 new treatment centers were planned to be opened by the end of 2005 and further 100 new centers would have been opened by 2006.⁶

Although nowadays day surgery procedures are common throughout the world and in many developed countries, day surgery is relatively new in some other countries. In the Netherlands, for example, only about 1/3 of all elective surgical procedures is performed as day surgery, and day surgery procedures are seen as an alternative to inpatient care in the case of declining bed supply.⁷ In Turkey, day surgery procedures are performed in many hospitals, but only a few hospitals have special day surgery units. Although data related to the number of these procedures are not sufficient, it is widely known that day surgery procedures are relatively new in Turkey and they are becoming increasingly common.

Recently, ambulatory or day surgery is highly preferred because of its advantages both for the patients and the health care system. Some of these advantages are increased patient satisfaction, early discharge or decreased duration of hospital stay, decreased risk of hospital acquired infections, a shorter wait for minor surgical procedures, minimal disruption of normal routine and less costs for the family of the patient.^{2,8-11} However, there are also disadvantages of day surgery, such as problems

related to anesthesia and surgery, including severe pain, nausea-vomiting, sore throat, weakness, sleep problems, muscle pain, and wound care problems or discomfort from dressing.^{12,13}

Studies have shown that there is a need for follow-up at home because of the various problems that patients encounter after day surgery procedures. In a review article by Mitchell⁴ it was reported that 19% of day surgery patients to contact with their primary physician within two weeks postoperatively, and 19% of the patients visited their primary physician at least once because of problems of coping with pain and the wound. In addition, the need for telephone follow-up of day surgery patients has been reported to convince them to admit to the health center when necessary has been reported.^{1,8,9,12,14,15} Although various problems are experienced after discharge of day surgery patients, studies show that they do not receive sufficient assistance from health care personnel. In the same review, it was reported that 93% of the patients in a certain study, had not been questioned about their need of help at home within the first three postoperative days, although they had undergone average length procedures under general anesthesia.⁴

The success of day surgery depends on effective teamwork. The day surgery team is expected to make medical, emotional, intellectual, social and cultural evaluations of the patients at every phase including preoperative, intra-operative, postoperative and home care, and to find out solutions for the identified problems.^{8,10,16-19}

Although there are many studies in the literature on problems experienced by day surgery patients at home, further surveillance studies are required, especially in the countries which day surgery procedures are relatively new, for the exploration and comparison of the differences between countries and development of these services throughout the world. In Turkey, very few studies have been undertaken to elucidate day surgery patients' problems. Based on our observations, day surgery patients and their families are not informed sufficiently about the preoperative process, anesthesia,

what should be done at home to prevent postoperative complications and conditions that need to be monitored within the first 24 hours (pain, nausea, vomiting, etc.) For this reason, patients face difficulties in the preoperative and postoperative periods both at the hospital and at home.

This study was conducted to determine day surgery patients' need for information and the problems experienced at home.

MATERIAL AND METHODS

This is a descriptive and cross-sectional study to determine day surgery patients' lack of information and the problems experienced at home.

SAMPLE AND SETTING

The research was conducted in a university hospital day surgery unit in Turkey's Ankara province. The research population was composed of all patients who had undergone surgery in the day surgery unit in 2003. A total of 230 patients residing in the province of Ankara who had undergone surgery in the day surgery unit in plastic surgery, urology, orthopedics, ear nose throat, ophthalmology and general surgery and who agreed to participate in the research were enrolled in the study. Forty patients who lost their data collection forms, who forgot to return for their follow-up appointments or who could not be reached by telephone were not included in the research. Another set of 30 patients were asked to participate, but refused to take part in the present study.

ETHICAL APPROVAL

Written permission of the hospital directors and day surgery directors was obtained. In addition, informed consents were obtained from the patients.

DATA COLLECTION AND ANALYSIS

In this study, data were collected by using two different forms developed by the authors, based on the literature and their personal observations. These were the 'Day Surgery Unit Patient's Personal Information and Knowledge Requirements Form' and the 'Difficulties Experienced After Hospital Discharge Form'. The former form was com-

posed of 13 items including the patients' sociodemographic characteristics and their requirements for information related to the day surgery process.

A review of the current literature revealed that day surgery patients experienced difficulties particularly on the first three postoperative days.^{4,12,13} For this reason, the "Day Surgery Unit Patients' Difficulties Experienced After Hospital Discharge Form" with 11 items was designed to ask general questions about the problems that may develop within the first three postoperative days (regarding the surgical site, respiratory system, vital signs etc.).

During the implementation phase, "Day Surgery Unit Patient's Personal Information and Knowledge Requirements Form" was completed in the day surgery unit. Data were collected in the postoperative period by researcher. After completion of the first form, the patients were given the second form, "Day Surgery Unit Patients' Difficulties Experienced After Discharge Form" and they were asked to record the difficulties that they experience each day for the next three days at home and were asked to submit this form on the day of their admission for their control visit to day surgery center. One hundred ten patients who did not come to the hospital or were not seen by the researcher were called by telephone to obtain the information on the second form. The research results were analyzed according to the number and percentage of the patients.

RESULTS

The research sample's demographic characteristics were as follows: 59.1% of the patients were in the 18-30 years group, 67.8% were females and 69.6% were university graduates. The overwhelming majority (97%) of the patients did not receive any information about day surgery procedures from any source prior to their admittance to the hospital.

Assessment of the distribution of day surgery patients by type of surgical procedure revealed that the most common procedures were nasal surgical procedures (47.8%), cystoscopy (7.4%) and breast biopsy (7%). These were followed by tonsillectomy, nevus excision, arthroscopy, mammoplasty,

urethral dilatation, scar revision, removal of implant, excimer laser procedure and surgical treatment of chalazion. When distribution of patients by type of anesthesia was analyzed, it was seen that 57.3% of the procedures were conducted under general anesthesia and 42.7% with local-regional anesthesia.

All of the patients in the sample had received information about at least one subject related to day surgery (Table 1). When the patients were

asked if they had received any information on preoperative preparations, it was seen that the majority (88.3%) had not received any information on the definition of day surgery and 56.5% had not received information concerning the risks and advantages of surgery. However, 94.3% of the patients were informed to come to the hospital for preoperative evaluation and 91.3% the patients knew what needed to be done at home in the days prior to surgery.

TABLE 1: Information received by the patients regarding day surgery.

	Receival of Information					
	Yes		No		Total	
	N	%	N	%	N	%*
Preoperative preparation						
Definition of day surgery	27	11.7	203	88.3	230	100.0
Benefits and risks of surgery**	100	43.5	130	56.5	230	100.0
Type of anesthesia	180	78.3	50	21.7	230	100.0
Type of surgery	207	90.0	23	10.0	230	100.0
Coming to the hospital for preoperative pre-evaluation	217	94.3	13	5.7	230	100.0
Things that needed to be done in the days before surgery	210	91.3	20	8.7	230	100.0
Preparation on morning of surgery						
Preparations that needed to be done before coming to hospital on the morning of surgery	11	4.8	219	95.2	230	100.0
Things that needed to be done upon arrival at hospital	154	67.0	76	33.0	230	100.0
Procedures that needed to be done in the day surgery unit						
Procedures that needed to be done during discharge	4	1.7	226	98.3	230	100.0
Day surgery unit admission procedures	30	13.0	200	87.0	230	100.0
Whom to ask when the patient had questions	98	42.6	132	57.4	230	100.0
Postoperative home care						
Needed to have a relative who can help with care	2	0.9	228	99.1	230	100.0
Not smoking cigarettes	1	0.4	229	99.6	230	100.0
When can return to work	4	1.7	226	98.3	230	100.0
Driving a car	6	2.6	224	97.4	230	100.0
When to bath	9	3.9	221	96.1	230	100.0
Time of first meal	12	5.2	218	94.8	230	100.0
Rest/exercise	15	6.5	215	93.5	230	100.0
Position	43	18.7	187	81.3	230	100.0
Foods that may be consumed	50	21.7	180	78.3	230	100.0
Procedures related to the surgical site	62	27.0	168	73.0	230	100.0
Medications	171	74.3	59	25.7	230	100.0
Time follow up return appointment	218	94.8	12	5.2	230	100.0
Problems related to surgical site and what should be done						
Bleeding	9	3.9	221	96.1	230	100.0
Drainage/oozing	16	7.0	214	93.0	230	100.0
Pain	167	72.6	63	27.4	230	100.0

n = 230

*Line percentage was used in the table.

**Information about surgical benefits and risks were evaluated together.

It was determined that the overwhelming majority (95.2%) had not been told what they had to do at home before coming to the hospital on the morning of surgery, however 67% had received information about what needed to be done when they came to the hospital. Almost all of the patients (98.3%) had not received information about necessary procedures in the day surgery unit while they were being discharged, and 87% did not know the procedures that needed to be done upon arrival to the day surgery unit.

When the patients' information related to the postoperative period was analyzed, it was determined that 99.6% of the patients were not informed about smoking cigarettes and 99.1% did not know that they would need a responsible adult or a relative to stay in the facility at all times for their care. On the other hand, 94.8% of the patients were told and knew precisely when they needed to return for follow-up control.

The analysis of information given about problems that could be experienced postoperatively at home revealed that only information about what needed to be done for problems at the surgical site had been given, however it was noteworthy that even this information was found to be inadequate. The majority of patients (96.1%) were not told what to do if they had bleeding of the surgical site. However the majority (72.6%) had been given information about relieving pain.

Although not shown on the table, approximately all of the patients stated that their physician gave this information to them verbally. In addition,

the patients stated that information given verbally could easily be forgotten, they did not understand the majority of what they were told, and that information provided in a written brochure would be more beneficial.

It is noteworthy that the majority of the patients (62.6%) did not consider the information that they received about the day surgery process as adequate (Table 2). Those who considered the information as inadequate wanted more information on problems that they might experience at home, and on how to deal with them (90.2%).

It is noted that most problems were experienced on the first day and that they decreased on the second and third days (Table 3). The most frequently experienced problem related to the surgical site was pain. This problem was followed by discomfort from the dressing (itching, tightness), and bleeding.

The most frequently experienced respiratory system problems were sore throat and difficulty in breathing. Other respiratory system problems experienced by the patients were coughing and temporary loss of voice.

The most frequently experienced vital sign problems were dizziness, headache and fever. The most common digestive system problems experienced by the patients were nausea, vomiting, loss of appetite and distention in the stomach.

Patients reported postoperative nervous system and emotional problems such as sleeping problems, anxiety, fear and difficulty in talking, memory problems, sleepiness and numbness.

TABLE 2: Evaluations of patients on sufficiency of the information given about day surgery process and their recommendations on this subject.

Sufficiency of information	N	%
Sufficient	86	37.4
Not sufficient	144	62.6
Recommendations	(n= 144*)	
Information should be given about problems that could be experienced at home and how to solve them	130	90.2
Information should be given about the day surgery process	114	79.1
Information should be given about anesthesia	74	51.3
Information should be given about medications	74	51.3

n = 230

*The number is increased because more than one answer was given to this question and percentages were based on the number of patients finding information to be insufficient.

TABLE 3: Problems experienced within the first three postoperative days.

Problems experienced	Days					
	1st day		2nd day		3rd day	
	N	%	N	%	N	%*
Problems related to the surgical site						
Pain	214	93.0	158	68.7	62	27.0
Discomfort from dressing (itching, tightness, etc.)	99	43.0	95	41.3	74	32.2
Bleeding	92	40.0	54	23.5	14	6.1
Drainage/oozing	88	38.3	51	22.2	21	9.1
Respiratory system problems						
Difficulty of breathing	120	52.2	88	38.3	56	24.3
Sore throat	120	52.2	99	43.0	53	23.0
Coughing	59	25.7	22	9.6	10	4.3
Voice loss	37	16.1	22	9.6	15	6.5
Problems related to vital signs						
Dizziness**	121	52.6	18	7.8	7	3.0
Headache**	98	42.6	52	22.6	16	7.0
Fever (feeling cold, shivering)	67	29.1	19	8.3	12	5.2
Digestive system problems						
Nausea-vomiting	99	43.0	8	3.5	2	0.9
Loss of appetite, stomach distention	74	32.2	43	18.7	19	8.3
Not being able to pass gas	26	11.3	5	2.2	3	1.3
Problems related to nervous system and emotional status						
Sleeping problems	146	63.5	103	44.8	44	19.1
Anxiety, fear	128	55.7	82	35.7	71	30.9
Difficulty of talking, memory problems, sleepiness, numbness	106	46.1	44	19.1	11	4.8
Urinary system problems						
Burning, pain while urinating, frequent urination	41	17.8	26	11.3	20	8.7
Inability to urinate	19	8.3	1	0.4	-	-
Musculoskeletal system problems						
Fatigue	182	80.0	145	63.0	90	39.1
Decreased movement	145	63.0	109	47.4	85	37.0
Muscle/back pain	65	28.3	32	13.9	12	5.2
Problems related to the home environment						
Not knowing when to bath	74	32.2	66	28.7	60	26.1
Problems related to medication use						
Not knowing frequency, time and how to take medication	45	19.6	9	3.9	4	1.7
Problems related to reaching health personnel when health problem occurs						
Not able to reach physician/nurse to ask question	84	36.5	41	17.8	18	7.8

n= 230

*Percentages were based on sample size.

**Because blood pressure changes (hypotension, hypertension) can cause head ache and dizziness these problems were included under vital sign related problems.

The most frequently experienced problem related to urinary system were difficulty of urinating, burning or pain while urinating and frequent urination. Patients reported postoperative musculoskeletal problems such as fatigue and limitations in movement.

Other problems reported by patients were related to the home environment, medication use and to reach the physician/ nurse to ask a question.

Although not shown in the tables, comparison of the problems experienced in the postoperative period varied greatly with the type of anesthesia, a

statistically significant difference in favor of local anesthesia was found for difficulty in breathing, coughing, sore throat, loss of voice, dizziness, nausea-vomiting, inability to pass gas, loss of appetite, swelling in stomach, speaking and memory disorders, sleepiness, numbness, sleep problems, inability to urinate, burning or pain when urinating, frequent urination and fatigue ($p < 0.05$).

As seen in Table 4, the majority of the patients (72.2%) required adequate and detailed information about the problems that might be experienced at home and how to deal with them and a 24 hour/day telephone for counseling (50%).

Although not shown in the table, 83.9% of the day surgery patients expected to get medical treatment and counseling from their physicians, 89.1% expected nursing care from their nurses and 46.5% expected to gather information about their diets from the dieticians.

DISCUSSION

Findings related to the needs for information of the patients on day surgery and the difficulties experienced at home show that patients had lack of knowledge on day surgery and experienced many problems in the postoperative period at home.

Giving information about preoperative preparation is important for adequate preoperative preparation and can decrease problems experienced in the postoperative period. The results obtained in

the present study revealed that it would be beneficial if the majority of the patients in this research received information about preoperative preparation, type of anesthesia, coming to the hospital for preoperative pre-evaluation and what they needed to do at home in the days before surgery. It was reported that approximately 50% of the day surgery patients were not informed about what had to be done at home in the days prior to the surgery (when to stop eating and drinking, etc.).²⁰

In a study by Laffey, et al.²¹ 13% of elective surgical patients did not know what type of surgery they had undergone. The percentage of patients who had been given information about preoperative preparation was higher in our study. However, the majority of our patients had not been given information about final preparations on the morning of surgery. The majority of patients in our study knew about the day surgery unit admission and discharge procedures, but only half of them knew whom to contact for questions. In a study conducted by Wallin, et al.²² 65% of day surgery patients knew whom to contact for problems faced at home.

It is well known that patients need to be informed about pain management, problems related to the respiratory, digestive, nervous, urinary and musculoskeletal systems, vital signs, emotional state, use of medications and how to reach health care personnel in the postoperative period at home. We would have desired that the majority of our pa-

TABLE 4: Patients' recommendations about day surgery services.

Recommendations*	N	%
Sufficient, detailed information about problems that can occur at home and their solutions should be given	166	72.2
A 24 hour/day telephone answering service should be established for questions	115	50.0
Sufficient, detailed information about the day surgery process should be given	84	36.5
Healthcare personnel should show interest, smile and be nice	63	27.4
Sufficient, detailed information about when medications should be given	41	17.8
Patients should not be kept waiting in the waiting room and in front of the operating room for a long period of time	23	10.0
The physician should see the patient before discharge	19	6.3
The patient dressing room/waiting room should be more appropriate and useable	9	3.9
There should be separate sections in the unit for adults and children and for men and women	7	3.0
A relative should be able to stay in the unit with the patient after surgery	4	1.7

n = 230

*Numbers are increased because more than one answer was given to questions and percentages were based on the number of patients for every area in the sample.

tients had been informed about pain relieving procedures.

The majority of our patients had been given information about their follow up appointment and medication aspects of postoperative home care, but they had not been informed about the other aspects. Lindén and Engberg²³ found that 85 of 105 day surgery patients had been informed about bathing and personal hygiene and 98 about their medications. In other similar studies on day surgery patients, it was found that the patients were given information about postoperative problems that might occur at home and how to deal with them, nutrition, wound care, bathing, medications, and activity and exercise.^{24,25} These results show that patients in our research did not receive adequate information on postoperative care at home.

All of our patients received only verbal information on day surgery from their physician but the majority forgotten or could not remember what was said. Lindén and Engberg²³ found that in the preoperative period, day surgery patients received information either from their physicians (14%) or a nurse (4%); on the day of surgery from a physician (19%) or a nurse (4%) and postoperatively from a physician (36%) or a nurse (5%), however the information provided was not sufficient and not satisfactory in content. In their studies on day surgery patients, Larsen and Gupta reported that the patients forget or do not understand the information they are given because of the effect of general anesthesia.²³

The majority of the patients in our research did not consider the information given to them as adequate. In addition, the majority of the patients stated that they would like to have information on the day surgery process, the postoperative problems that might occur at home and how to cope with them. According to Brumfield et al.,²⁶ the main subjects on which day surgery patients want more information were preoperative nursing care, what, when and why procedures were performed in the day surgery process, how and when they could see the results of surgery, what was expected of patients, how to cope with worry and stress, and

what needed to be done to prevent complications. The results of our study are similar to the results of other studies.

General evaluation of the information given to our patients on day surgery suggested that the patients did not receive enough information about the day surgery process and had a need for further information.

It is known that giving adequate information to patients on their needs about the day surgery process during the preoperative evaluation and at discharge plays an important role for decreasing their anxiety, decreasing the problems that can be experienced at home, increasing the rate of recovery and return to work, and increasing patient satisfaction. The health care personnel has an important role in informing patients and their families on these issues throughout the day surgery process, both verbally and in written form in a manner that they can understand.^{8,18,26-28}

It has been reported that patients undergoing day surgery procedures may experience problems including bleeding, pain, discomfort from the dressing, difficulty in breathing, coughing, sore throat, fever, dizziness, headache, nausea and vomiting, numbness and sleepiness, various urinary system problems and fatigue within the first three days after surgery.²⁹⁻³⁵ In accordance with these reports, we determined in our study that patients experienced the same problems in the first three days after surgery. These were expected symptoms and findings that the majority of our patients experienced primarily on the first day after surgery and they decreased progressively on the second and third days due to the decreased effects of surgery and anesthesia.

Pain is a major problem in the postoperative period. In a multicenter study conducted by Pfisterer et al.,³⁶ it was determined that 65% of patients experienced pain on the first day after surgery. Similarly Payne et al.³⁷ found that 74% of day surgery patients experienced pain on the first day after surgery. In accordance with the literature, in the majority of our patients, the most significant problem on the first and second days after surgery was pain at the surgical site.

Oberle et al.¹² reported that approximately 36% of day surgery patients had discomfort due to their dressings in first three postoperative days. In other studies conducted with day surgery patients, Lindén and Engberg²³ found that 9 out of 55 patients experienced discomfort from the dressing on the first postoperative day. A small number of patients faced problems of bleeding at home on the first postoperative day.²³ The findings in these studies were different from ours with higher percentages of surgical site problems in the postoperative period.

The placement of an endotracheal tube during general anesthesia to maintain airway patency can cause tissue damage from the mouth to the nasopharynx. For this reason, patients can experience difficulty in breathing, sore throat, coughing, and loss of voice postoperatively. In addition, patients who have a longstanding history of cigarette smoking, respiratory system problems, and who were not given deep breathing and coughing exercises preoperatively can have postoperative respiratory system problems.^{38,39} The most common respiratory system problems experienced by our patients in the postoperative period were difficulty in breathing and a sore throat. In a study conducted by Türe et al.,⁴⁰ on day surgery patients, 99.2% of the patients who received endotracheal intubation and general anesthesia and 38% of those who had otolaryngologic surgical procedures experienced sore throat on the first seven postoperative days. In another study conducted on day surgery patients, Bauer and his coworkers⁴¹ found that approximately 32% of the patients had sore throat and 33.3% had loss of voice on the second postoperative day. In our study the percentage of patients experiencing sore throat in the postoperative period was lower than the above mentioned reports.

Bauer et al.,⁴¹ also found that 14.8% of day surgery patients had shivering and 23.5% felt cold on the second postoperative day. In the study by Chung et al., 10% of the patients had dizziness, 13% had headache and 4% had fever on the first postoperative day.⁴¹ The patients in our study experienced more problems related to vital signs.

In the literature, nausea and vomiting are the most common problems experienced by day surgery patients as a postanesthesia effect.³² Nearly half of the patients in our study faced problems with nausea and vomiting. The percentages of patients who experienced nausea and vomiting postoperatively vary between studies. In the study reported by Morales and coworkers,⁴² 10.4% of the patients had nausea and vomiting on the first postoperative first day and 25% on the second postoperative second day. The results of the study conducted by Türe, et al.⁴⁰ demonstrated lower rates; 7.2% of the patients had nausea and 4.4% had vomiting in the first seven postoperative days.

The majority of our patients had sleep disorders, experienced worries and fears, speech and memory disorders, sleepiness and numbness. In other studies conducted with day surgery patients, Bauer, et al.⁴¹ found that approximately 80% of patients had sleepiness and numbness on the second postoperative day and approximately 21% had memory disorders; Türe et al.⁴⁰ reported that 3.5% of patients had sleepiness and numbness and 3.2% had sleep problems within the first seven postoperative days. Payne and coworkers,³⁷ found that 32% of patients had sleeping problems in the first 24 hours postoperatively because of pain.

The anesthetic agents used during surgery can cause muscle weakness and fatigue in the postoperative period.^{31,40} Westman and coworkers²⁹ found that the majority of patients experienced fatigue within the first 12 hours postoperatively which decreased in the following days. Oberle et al.¹² found that patients particularly experience obvious fatigue on the first three postoperative days. The majority of patients in our study had muscle and/or back pain, limited mobility and fatigue. The results of these studies are similar to the results found in our study.

It was determined that, when patients experienced problems after discharge at home and needed information regarding the medication they used, they experienced difficulty reaching a health care professional. This is an important problem since more than one third of the patients were

unable to reach a health care professional on the first postoperative day, and the availability of health care professionals decreased even more by the second and third days after surgery. This decrease may be the result of the diminishing problems of the patients day by day following surgery. Informing patients about their needs is important to decrease their anxiety and the problems experienced in the postoperative period.

Based on the findings obtained in this research it can be said that patients experienced problems in many areas in the postoperative period. The reason for this may be giving insufficient information on postoperative problems that can occur and on how to deal with them. It is known that adequately informing patients about the day surgery process is important for decreasing potential postoperative problems. This consideration is supported by the findings of Lindén and Engberg³⁰ who reported that the patients who were not satisfied with the information they had received experienced more pain, anxiety, dizziness and sleep problems at home.

In the comparison of anesthesia type with experience of postoperative problems, general anesthesia was found to be more problematic than local anesthesia. It is known that general anesthesia affects many systems in the body and can cause a variety of problems in the postoperative period. It can be the cause of problems including nausea and vomiting, sore throat, feeling like fainting (dizziness and blurred vision), difficulty in breathing, confusion, memory disorders, urinary system problems, muscle pain and fatigue. In the postoperative period these problems decrease as the anesthetic effect decreases.^{38,42,43} Morales and his coworkers⁴¹ found that 18.6 % of day surgery patients who received general anesthesia experienced sleepiness and numbness and 13.9% experienced nausea and vomiting. In the study by Ture et al.⁴⁰ on 654 day surgery patients it was found that 35% of the patients experienced anesthesia-related problems, and that 44% of these problems were effects of inhaled anesthetic agents, 27% intravenous anesthetic agents, 30% central nerve block and 24.7% peripheral nerve block ef-

fects. In the same study it was determined that the problems experienced after inhalation agents included muscle weakness, sore throat, dizziness, sleep problems, lack of appetite and dysuria; and the problems after intravenous agents included sore throat, muscle weakness and pain. In a study conducted by Kangas-Saarela et al.⁴⁴ 30.2% of patients after general anesthesia and 6.8% after spinal anesthesia complained of back/lower extremity pain, headache, nausea-vomiting or sore throat. The results of our study are similar to the other studies in the literature.

The majority of the recommendations made by our patients about day surgery services were related to providing information about day surgery to prevent postoperative problems. Since sufficient information was not given prior to discharge, patients were unable to reach healthcare personnel when a problem arose; it is understandable that they would recommend 24-hour/day telephone accesses to health care personnel for guidance. It is necessary to inform the patients and their families to decrease potential postoperative problems at home to increase patient satisfaction and to ensure continuity of care.^{8,18}

In the examination of patients' expectations of healthcare personnel it can be said that their expectations from physicians, nurses, dieticians and physiotherapists were appropriate to their roles.^{8,10,17} In the study by Mitchell⁴ on patients undergoing gynecologic laparoscopy procedures in a day surgery unit, the majority of patients (72%) preferred to have a nurse near to them to alleviate their anxiety because they had established good communication with them.

CONCLUSION AND RECOMMENDATIONS

When the findings obtained from this study are evaluated, it can be said that the day surgery patients experienced various problems in the postoperative period and their knowledge about the day surgery process and the solutions of the problems were insufficient. The issues addressed in this study have implications for nursing practice and research. The results of the study were reported to relevant institutions. A guide for day surgery patients

have been prepared by the authors based on the results of this study, and its use is recommended. In order to decrease postoperative problems experienced by patients, the following recommendations are made:

In the perioperative period verbal and written (booklet, brochure) detailed and adequate information should be given to the patients and their relatives about the day surgery process and nurses should take effective role in these process.

1. In the postoperative period, a telephone line for guidance should be easily available to all patients, 24 hours a day,

2. A telephone monitoring and home care system should be established for patients who have undergone surgery in the day surgery unit,

3. Results of this descriptive study cannot be generalized to all day surgery patients. Further studies should be conducted to determine the problems of specific patient groups in various day surgery units.

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