

Patient Satisfaction With The One Day Cataract Surgery

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ABSTRACT

Purpose: The aim was to determine the degree of patient satisfaction with the one day cataract surgery and detect critical points that could serve as a basis for the future improvements.

Methods: In this research, the occasional samples were the patients who came for grey cataract surgery, and passed through the outpatient clinic. The criteria for including patients in the research were that they came for cataract surgery and were admitted through outpatient clinic. None of the patients were excluded from the research and none of them were retrospectively included. The data in this study was collected by an anonymous questionnaire created for the needs of this research. The questionnaire was filled after the surgery procedure

Results: Statistical analysis of the obtained data showed that the majority of patients, 130 (87.2%) of them, are satisfied with the cataract surgery, 12 (8.1%) are partially satisfied and the minimum number of patients, only two of them, are somewhat dissatisfied with the operation. There is no patient who is unhappy with the cataract surgery.

Conclusions: Studies have shown that hospitalization is an especially traumatic and stressful experience, which is greatly reduced with the introduction of the daily hospital care.

Key words: cataract surgery; daily hospital care; nurse; patient satisfaction

1 INTRODUCTION

Lens is optically clear structure situated behind the iris and in front of the vitreous and retina. It consists of lens capsule, the thinnest basal membrane in the human body and ray-shaped lens fibers distributed in such a manner that the youngest cells are on the top and contain organelles, while the older ones are positioned centrally. Cataract is turbidity of otherwise clear lens [1]. The term cataract was first used by Constantinus Africanus, a monk and Arabic ophthalmologist. It most frequently occurs in the elderly population and thus the name senile cataract. Cataract is the most common cause of reversible sight-loss in the world and it is estimated that by 2020 number of the blind caused by cataract will have reached 50 million. According to WHO estimations, approximately 180 million people

are visually impaired, while 40 to 50 million are not able to move around without others' help [2]. Causes of cataract vary: from developmental abnormalities, trauma, inflammation, metabolic disorders as well as medications side effects, but most cataracts are of the unknown etiology and those are called senior cataracts. Being that world population is constantly growing, and life expectancy is longer, the number of senior cataracts is expected to grow, and according to some predictions, the number could have doubled by 2020. Current frequency of cataract surgeries in the USA is 5000 per million people a year, while in Africa there are only 200 per million people a year [2].

The etiology of senior cataract still has not been completely explained, and according to present information it is multifactorial. Genetic factors play a part in development

of nuclear as well as cortical cataract, and many studies have shown that women are at greater risk of developing cataract. Epidemiologic research of ultraviolet radiation show that exposure to UV B rays causes cortical changes to the lens. Earlier origination of cataract, especially development of cortical and back subcapsular cataract, is connected to development of diabetes and keeping it under control. It is important to emphasize that systematic application of corticosteroid drugs is tightly connected to the occurrence of back subcapsular cataract.

1.1 Cataract treatment

Preventive methods which include pharmacological interventions, like antioxidants have not been proven clearly effective in clinical experiments. Until new, medicament ways of treating and preventing cataract have been found; surgical cataract removal will stay the only effective method; faco emulsification has provided the best results so far. At the moment, there is no efficient medicine which would stop or decelerate the progress of lens turbidity.

1.2 Surgical treatment of cataract

The first data about surgical removal of cataract date back to 2000 BC when ancient Indian physicians used a number of instruments for surgical treatment of many diseases [3]. Today, cataract surgery which uses ultrasound – facoemulsification, first performed by Charles Kelman in 1967, is the most common surgical procedure in the world. Cataract surgery is the surgery of choice. Basic indications for cataract surgery are functional sight disorders which subjectively limit patients' daily activities and decrease the quality of life. Objective grade of cataract's influence on patient's vision is most frequently obtained by measuring visual acuity and testing contrast sensitivity. There are two basic surgical methods for removing cataract: intracapsular (removal of lens with the capsule) and extracapsular (lens is removed while the capsule is left in its natural bag). Whenever possible, the natural lens is substituted by an implanted intraocular artificial one. State following the implantation of artificial lens is called pseudophakia.

In 1949, English ophthalmologist Harold Ridley noticed that there was high tolerance of poly (methyl methacrylate) shards from the windshield of a cockpit in the eyes of injured pilots from the WWII. In 1949, he implanted the first PMMA intraocular lens after extracapsular extraction of natural lens [3]. The first intraocular lenses were hard, later, as modern techniques of cataract surgery were advancing; soft lenses which can be implanted through the incision appeared. Most commonly implanted lens type today is monofocal intraocular lens, which, due to precise measurements and great dioptric range, can guarantee sharp vision in patients with no need for wearing glasses [4].

1.3 Modern approach to cataract surgery

At Eye Diseases Clinic of Josip JurajStrossmayer Medical Faculty, at "Sveti Duh" Hospital, 10-20 cataract surgery

procedures are performed every day. The patients are mainly processed through outpatient clinic and are released home 2 hours after the procedure performed under local anesthesia. If they come from faraway places, or are unable to organize going home and coming back for checkup the next day, they remain in the hospital until morning, when they are released home after the scheduled doctor's checkup. The main reason for patients not being included in an outpatient hospital list is patient's free choice, the existing medical complications and their social circumstances [5].

After the surgery, the nurse from the outpatient clinic comes to pick up the patient and escorts them to the outpatient clinic. Patients are released home two hours after the surgery. Escort and transport are organized by patients. When necessary, the nurse organizes transport by non-emergency patient transport services, they arrange the time of arrival, fills in travel orders and contact competent institutions (nursing home or other institution). Majority of studies has shown that patients were asked to organize transport themselves, but that has not been a problem even for the patients from the remote areas [6–8]. Nurse helps the individual, healthy or ill, in activities which contribute to their health or recovery (or peaceful death). The patient would have been doing these things themselves if they had the needed strength, will or knowledge; and the help needs to be provided in such a manner to enable them getting back their independence [9, 10]. Although cataract can significantly affect the quality of life, it can successfully be removed; the turbid lens is replaced by a new one and sight gets better. Nurses provide help and support in caring for that kind of patients [11]. The future of nursing mostly depends on well-educated nurses who will join nurses of the world, primarily Europe, through education of their own staff by taking part in creating healthcare politics and research within nursing profession. Educational programs for nurses should be constantly developed pursuant to international standards and demands, as well as national experiences and needs [12].

1.4 Objective

The objective of this graduation paper is:

- To assess the degree of patients' satisfaction with one-day cataract surgery.
- Reveal critical points of one-day cataract surgery through comprehensive questioner to base improvements on.

1.5 Hypothesis

Patients are satisfied with one-day cataract surgery and they consider it a positive experience with minimal unwanted developments.

1.6 Subjects and methods

1.6.1 Study organization

Quantitative cross-sectional study has been conducted

1.6.2 Subjects

In this research, the occasional samples were the patients who came for grey cataract surgery at Clinical Hospital “Sveti Duh” hospital, the Eye Diseases Clinic, and passed through the outpatient clinic. The research included 149 subjects. The research was conducted during two-month period (July and August, 2015). The criteria for including patients in the research were that they came for cataract surgery and were admitted through outpatient clinic. None of the patients were excluded from the research and none of them were retrospectively included.

2 METHODS

The measuring system for this research was anonymous questionnaire created for the needs of this research. The questionnaire was filled after the surgery procedure, during the patients’ two-hour stay in outpatient clinic.

2.1 Statistical methods

Research data are shown tabularized and shown graphically with the descriptive statistics of the sample. Data gathered via questionnaire are shown in the form of frequencies and percentages (percentage calculation shown for every question, what percentage of subjects was dissatisfied, what percentage of subjects was moderately satisfied and what percentage of subjects were satisfied...). To calculate if arrangement of these percentages i.e. frequencies (the number of subjects who answered that they were dissatisfied, moderately satisfied, satisfied...) differs from the one we would expect per case. The values of overall satisfaction with surgery are shown through the median and interquartile range, being that Kolmogorov-Smirnov test established divergence of data from normal distribution. Hi square test was used for calculating the difference between the observed frequencies distribution and expected frequencies, and level of significance was set to 0, 05. All the values lower than 0, 05 were considered statistically important. The analysis used IBM SPSS Statistics programming support.

3 RESULTS

Total of 149 subjects were included in the research. Out of that number, there were 59 (39.6%) men and 89 (59.7%) women. Gender data were not collected for one subject.

Data about age were collected for 122 (74.73%) out of 149 subjects, while the rest of subjects did not answer this question. Average age of subjects is 75. The youngest subject was 45 years old, and the oldest one was 93.

Research has shown that the majority of patients chose Eye Diseases Clinic “Sveti Duh” of the Faculty of Medicine “Josip JurajStrossmayer” in Osijek because of its vicinity to the place of their living 45 (30.2%) and recommendation 43 (28,9%). They are followed by patients to whom the clinic was the first choice 36 (24.2%), and the smallest number of patients 4 (2.7%) chose the clinic by chance. Research has

shown that the patients who had other reasons for choosing this clinic have most often been treated in that clinic and they did not want to change the physician. The observed distribution of results significantly differs from the distribution we would expect according to case ($\chi^2(4) = 39.826, p < .01$).

Research has shown that the majority of patients 109 (73.2%) do not consider coming to the hospital seven days prior to surgery for the preoperative assessment exhausting at all, while the smallest number of them, 9 (6%) considers coming to the hospital seven days prior to surgery very exhausting. 31 (20.8%) of the subjects considers coming to hospital seven days earlier somewhat exhausting. The observed distribution of results significantly differs from the distribution we would expect according to case ($\chi^2(2) = 111.195, p < .01$).

By analyzing gathered data, we have established that 9 (6%) of the patients considers coming to the hospital for the preoperative processing seven days prior to surgery very exhausting. The table shows their reasons, the data are arranged chronologically, from most to least frequent. Table 1

Table 1. Reasons why subjects consider coming to hospitals even days prior to surgery very exhausting

CATEGORY	N (%)
Health condition.	8 (25.8%)
Transport organization.	5 (16.1%)
Wakingupearly.	4 (12.9%)
Thecheckupwasexhausting.	3 (9.6%)
I live far away. Wakingupearly.	3 (9.6%)
I wouldlike to geteverythingdone on the same day.	3 (9.6%)
Heat.	2 (6.4%)
Becauseofthe waiting.	1 (3.2%)
Fearofthe procedure.	1 (3.2%)
I live alone.	1 (3.2%)

N = number of subjects (76).

By analyzing gathered data, we have established that 109 (73.2%) of the patients does not consider coming to the hospital for the preoperative processing seven days prior to surgery very exhausting at all. The table shows their reasons, the data are arranged chronologically, from most to least frequent. Table 2

N= number of subjects (20).

Research has shown that majority of patients, 122 (81.9%) of them that coming to the hospital at 6:30 AM on the day of the surgery is not too early, 20 (13.4%) considers it to be too early. The smallest number of patients, 7 (4.7%) are indifferent to when they will come to the hospital. The observed distribution of results significantly differs from the distribution we would expect according to case ($\chi^2(2) = 159.718, p < .01$).

By analyzing gathered data, we have established that 20 (13.4%) of patients considers coming to the hospital early in the morning (6:30 AM) on the day of the surgery to be a problem. The table shows their reasons, the data are arranged chronologically, from most to least frequent. Table 3

Table 2. Reasons why patients consider coming to hospital 7 days prior to surgery exhausting

Category	N (%)
Thathas to bedone. Obligation	26 (34.2%)
Itbenefitsmyhealth; itisinmybestinterest.	10 (13.1%)
Vicinity to my place ofliving.	9 (11.8%)
Organized transport.	6 (7.8%)
Itwasoversoon.	6 (7.8%)
I like to finishallmyobligations on time.	5 (6.5%)
I usually wake uearly.	4 (5.2%)
Itis a goodpreparation for surgery.	3 (3.9%)
Thestaffisverypleasant.	2 (2.6%)
Goodorganization.	2 (2.6%)
I wasrelaxed.	1 (1.3%)
Itisbetter to getthatdoneearlierbecauseoftheheat.	1 (1.3%)
Itwasnothot.	1 (1.3%)

Table 3. Reasons why patients consider coming to the hospital early in the morning exhausting.

CATEGORY	N (%)
Transport.	6 (30%)
Health condition.	5 (25%)
Wakinguearly.	4 (20%)
I do not live in Zagreb.	3 (15%)
Everythingcanbedonelater.	2 (10%)

N= number of subjects (20)

By analyzing gathered data, we have established that 122 (81.9%) of subjects does not consider coming to the hospital early in the morning (6:30 AM) on the day of surgery to be a problem. The table shows their reasons, the data are arranged chronologically, from most to least frequent. Table 4

Table 4. Reasons why patients do not consider coming to the hospital early in the morning exhausting

CATEGORY	N (%)
Thesooneer I come, thesooneer I willbedone.	29 (31.1%)
Thathas to bedone, surgeryismandatory.	18 (19.3%)
I wake uearlyanyway.	13 (13.9%)
Vicinity to the place ofliving.	13 (13.9%)
Itisnothotthat time ofday.	7 (7.5%)
I havegottransportation.	6 (6.4%)
I had a greatwish to comeandgetitdone.	4 (4.3%)
One shouldbe on anemptystomach as shortly as possible.	1 (1.07%)
Itisgood for psychicalpreparation.	1 (1.07%)
I live alone.	1 (1.07%)

N= number of subjects (93)

Research has shown that only one patient 1 (0.7%) was not satisfied by physician's checkup 7 days prior to surgery and information provided by the physician, while all the other patients, 148 (99.3%) of them, were satisfied. The observed distribution of results significantly differs from the

distribution we would expect according to case ($\chi^2(1) = 145.027, p < .01$).

Research has shown that only one patient was not satisfied with services and information provided by the nurse seven days prior to procedure, while all the other patients, 148 (99.3%) of them were satisfied. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(1) = 145.027, p < .01$).

Research has shown that the majority of patients, 130 (87.2%) of them tolerated premedication with a tablet of Diazepam well, 10 (6.7%) of them did not tolerate premedication with Diazepam 5 mg well. 8 patients, 8 (5.4%) of them did not take Diazepam tablet, and one patient did not answer this question. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(2) = 197.892, p < .01$).

By analyzing gathered data, we have established that 10 (6.7%) of patient did not tolerate premedication with Diazepam a 5 mg (Apaurin, Krka, Novo Mesto). The table shows that they mainly felt dizzy, sleepy or nauseous after they had taken the tablet. The data is arranged chronologically, from the most common to the rarest.

The research has shown that the majority of patients, 136 (91.3%) of them, tolerated well getting into certain lying position calmly during the surgery, while 13 (8.7%) of patients did not take it well. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(1) = 101.537, p < .01$). Table 5

By analyzing gathered data, we have established that 13 (8.7%) of patients did not take having to lay down still during the surgery. The table shows their reasons. Data is arranged chronologically from the most common to the rarest. Table 5

Research has shown that the majority of patients, 129 (86.6%) of them considers it is important that the nurse informs them about each following step in the operating theatre, while the smallest number of patients, 8 (5.4%) of them, considers it irrelevant. 11 (7.4%) of patients do not care if they are going to be talked to the procedure or not. One patient did not answer this question. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(2) = 193.068, p < .01$). Table 6

df = degree of freedom; χ^2 = chisquare test; * - $p < .05$; ** - $p < .01$

Research has shown that the majority of patients, 121 (81.2%) of them considers it is important that the doctor informs them about each following step in the operating theatre, while the smallest number of patients, 11 (7.4%) of them, considers it irrelevant. 16 (10.7%) of patients do not care if they are going to be talked to the procedure or not. One patient did not answer this question. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(2) = 156.419, p < .01$). Table 6

Research has shown that the largest number of patients 93 (62.4%) of them, considers that music during the surgery

Table 5. Reasons for intolerance to Diezepam , reasons for not tolerating lying down

The most common reasons for intolerance to Diazepam premedication	N (%)	Reasons for not tolerating lying down during the surgery well	N %
Dizziness	4 36.6%	Pain (eye, arm, and vertebra).	8 72.70
Sleepiness	4 36.6%	It is hard for me to lay down still.	5 45.40
Nausea	3 27.20%	My entire body got completely numb.	1 9.09%

Table 6. Percentage calculation of importance of patients being informed by the nurse and by the doctor in the operating theater, and importance of music playing during the surgery

	Yes		No		All the same		df	χ^2
	N	%	N	%	N	%		
Importance of patients being informed by the nurse	129	86,6	8	5,4	11	7,4	2	193,068**
Importance of patients being informed by the doctor	121	81,2	11	7,4	16	10,7	2	156,419**
Importance of music playing during the surgery	93	62,4	19	12,8	35	23,5	2	61,878**

had a relaxing effect on them; they are followed by those who said that they did not care for music 35 (23.5%). The smallest number 19 (12.8%) of them, believes that music did not have the calming effect on them. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2 (2) = 61.878, p < .01$). Table 6

Research has shown that local anesthesia is enough to remove the pain during the surgery for the majority of patients 124 (83.2%) of them, while the remaining 17 (11.4%) stated that it was not enough to remove their pain during the surgery. The smallest number of patients 7 (4.7%) of them, thinks that they felt pain due to fear. One patient did not answer this question. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2 (2) = 170.527, p < .01$).

The total of 94 patients had the surgery of the other eye done at our Eye Diseases Clinic "Sveti Duh". Research has shown that for majority of patients 62 (66%) of them, considers cataract surgery on the other eye more difficult. The remaining patients, 32 (34%) of them, did not find the second surgery to be more difficult than the first one. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2 (1) = 9.574, p < .01$).

By analyzing gathered data, we have established that 62 (66%) of the patients find the second surgery to be more difficult than the first one. Patients mainly state that the main difference between the first and the second surgery is that they felt greater level of pain during the second surgery. The table shows their reasons. Data is arranged chronologically from the most common to the rarest. Table 7

N = number of subjects (66)

Research has shown that two-hour rest in the outpatient clinic was long enough period for majority of patients 127 (85.2%) of them. 14 (9.4%) of the patients consider that the period is too long. Only 5 (3.4%) of patients consider that period to be too short. Three patients did not answer this question. The observed distribution of data statistically

Table 7. Reasons why cataract surgery on the other eye was more difficult

CATEGORY	N (%)
Pain.	50 (75.7%)
Difficulties with the lens.	5 (7.5%)
It was hard for me to look at the light.	4 (6.06%)
I am older.	5 (7.5%)
It seemed to last longer.	2 (3%)

significantly differs from the distribution we would expect according to case ($\chi^2 (2) = 189.959, p < .01$).

By analyzing gathered data, we have established that 5 (3.4%) of the patients consider that 2-hour stay in outpatient clinic is too short period due to the fear of possible late complications and their general health condition. Table 8

Table 8. Reasons why patients think that 2-hour stay in outpatient clinic is too short period.

CATEGORY	N (%)
Fear of later complications.	2 (66.6%)
Bad health condition.	1 (33.3%)

N = number of subjects (3)

By analyzing gathered data, we have established that 14 (9.4%) of the patients that 2-hour period in outpatient clinic is too long. The table shows their reasons. Data is arranged chronologically from the most common to the rarest. Table 9

Table 9. Reasons why patients consider 2-hour period in outpatient clinic to be too long

KATEGORIJA	N (%)
Waiting too long.	4 (28.5%)
I wanted to go home right away.	3 (21.4%)
It is not necessary if there are not any complications.	3 (21.4%)
Sitting is hard for me.	3 (21.4%)
I was afraid/my house was broken into 3 times.	1 (7.14%)

N = number of subjects (14).

Research has shown that majority of patients 118, "79.2%" of them, does not think that the control

check up a day after the surgery is complicated. Three patients did not answer this question. 28 (18.8%) think that the control check up a day after the surgery is complicated. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(1) = 55.479, p < .01$).

By analyzing gathered data, we have concluded that 28 (18.8%) of patients finds coming for check up a day after the surgery to be complicated. The table shows their reasons. Data is arranged chronologically from the most common to the rarest. Table 10

Table 10. Reasons why patients think coming to control checkup a day after the surgery is complicated.

CATEGORY	N(%)
Transportation.	8 (38.9%)
I don't live in Zagreb.	4 (19%)
It is too early.	2 (9.5%)
Health condition (chronic disease, disability, locomotive difficulties, bad vision).	4 (19%)
Traveling is hard.	2 (9.5%)
Everything could have been done on the same day.	1 (4.7%)

N = number of subjects (21)

Research has shown that majority of patients 146 (98%) of them, were satisfied with the services and information provided by the nurse in outpatient clinic. Only 3 (2%)

patients, were not satisfied. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(1) = 137.242, p < .01$).

Research has shown that majority of patients 130 (87.2%) of them, was satisfied with the surgery and the "treatment" they went through during one-day cataract surgery; they are followed by who were partially satisfied 12 (8.1%). 5 (3.4%) of patients is neither satisfied nor unsatisfied with the surgery. The smallest number of patients, i.e. two of them 2 (1, 3%) is somewhat unsatisfied with the cataract surgery and not one patient is unsatisfied with the surgery. The observed distribution of data statistically significantly differs from the distribution we would expect according to case ($\chi^2(4) = 309.336, p < .01$).

In accordance to these data, value median equals 5, as well as the borders of inter quartile range. Table 11

Table 11. Percentage calculation of overall patients' satisfaction with one-day cataract surgery

	N	%	df	χ^2
Unsatisfied	0	0		
Somewhat unsatisfied	2	1,3		
Neither satisfied nor unsatisfied	5	3,4	4	309,336**
Somewhat satisfied	12	8,1		
Satisfied	130	87,2		

df = degree of freedom; χ^2 = hi square test; * - $p < .05$; ** - $p < .01$

Table 12.

Overall satisfaction with one-day cataract surgery	C	Q1	Q2
	5	5	5

4 DISCUSSION

Cataract surgery is one of the most common surgeries in medicine in general and it is certainly one of the most successful ones. By developing ophthalmology practices, achievements of medical technology and advancing surgical techniques in the last several years, cataract surgery has become one of the safest surgeries in modern medicine. For several years, there has been a world trend of hospitalization to the level that some authors state that there has been a dramatic decrease in hospital facoemulsification in general.

Ophthalmologists have been debating about advantages and disadvantages of one-day cataract surgery for decades, but it has only recently become widely popular. Vision damage as a consequence of the cataract, can have a very negative effect on quality of life of the elderly. The effects of such vision damage justify surgery as a mean to improve vision and renew quality of life.

A quantitative (cross-section) study was conducted during July and August 2015, in Clinical Hospital "Sveti Duh", at Eye Diseases Clinic of the "Josip Juraj Strossmayer" Medical School in Osijek, of the Referent center of Ministry of Health children's ophthalmology and strabismus.

The total of 149 patients took part in the research, and primary goal of the research was to evaluate degree of patients' satisfaction with the one-day cataract surgery.

The second goal was to reveal critical points of one-day cataract surgery which leave space for further improvements.

There was not statistically significant difference in patients' selection by gender and age.

There is statistically significant difference in percentage of the various reasons why patients chose Clinic for Eye Diseases "Sveti Duh", for the vicinity to their place of living 45 (30, 2%) and because of recommendation 43 (28, 9%).

As regards organization of work at the clinic and coming for preoperative processing seven days prior to surgery, there is a statistically significant difference in number of patients who do not find coming to hospital difficult at all 109 (73, 2% of subjects), somewhat difficult 31 (20, 8% of subjects) and very difficult 9 (6% of the subjects). To establish the reasons for their opinions with certainty, every patient had to explain each of the given answers. Patients who thought that it was not difficult at all stated that it is the day reserved for surgery and that it has to be done; that it is in their best interest; if they come earlier they will be finished sooner and they specially praise courtesy of doctors and nurses as well as good work organization. They also say that they did not have to wait long and that check up was done quickly.

Patients who stated that coming to the clinic seven days prior to surgery is somewhat exhausting or very exhausting (the total of 40 (27%) of the patients), were the patients

with slightly worse health condition, patients suffering from chronic diseases, they had locomotive difficulties or lived alone.

It is important to all patients during their stay in the clinic during preoperative processing seven days prior to surgery, as well as on the day of the surgery, that doctor and the nurse dedicate enough time to them explaining every following step. Large number of subjects 148 (99%) stated that they were satisfied with the information provided by the doctor and the nurse. Only one patient was not satisfied.

Besides the information provided in the outpatient clinic, the patients believe that it is also important to be informed about each following step in the operation theater by the doctor and the nurse. There is a statistically significant difference in the number of patients who consider it important to be informed about each following step in the operation theater by the nurse 129 (86, 6%) of the subjects, those who do not consider it important 8 (5, 4%) of the subjects and those who do not care if they are informed about the procedures in the operation theater or not 11 (7, 4%) of subjects.

In 2008 Ehab and colleagues conducted the study in Great Britain titled „ Patient satisfaction with cataract surgery “. In the conducted research, they had proven that 24 patients had given positive comments related to their satisfaction, while 19 of them had given negative comments. Positive comments praise the service, professional, empathetic and capable staff from the nurses to porters, clerks and doctors. Patients had commented that they felt relaxed [13].

Premedication for every patient prior to cataract surgery at our clinic is one tablet of Diazepam 5mg (Apaurin, Krka, Novo Mesto). Research has shown that the medication has a relaxing effect on the patients and it decreases fear of the surgery. 130 (87, 2%) of the subjects had taken this sort of premedication well. Contraindication for this kind of premedication is that patients already take same or a similar therapy (antidepressants and alike). Small number of patients 10 (6, 8% of them) felt dizzy or sleepy after taking the tablet.

Cataract surgery is done under local anesthesia; during the surgery patients have to lay still without changing position. Significantly large number of patients 124 (83, 3%) stated that they did not feel any pain during the surgery which shows that dripping the local anesthetic Tetracaine 0.5% (Tetracaine 0.5% city pharmacy Zagreb) is enough to get through the surgery with no major complications.

Topical anesthesia combined with preoperative premedication has become the most commonly used type of anesthesia and standard in cataract surgery in collaborating patients. Only 17 (11, 4%) of the patients stated that they felt pain during the surgery which shows that dripping the local anesthetic into those patients' eyes was not enough for the procedure to be painless. 7 (4, 7%) of the patients stated that they had not felt the pain due to the fact that they had overcome fear.

After the procedure, the patients stay in the clinic for two hours and are released home after that period. The largest

number of patients 127 (85, 2%) state that that period is long enough for the recovery, short rest and getting ready to go home. 14 (9, 4%) of patients think that the period is too long and that they should be released home sooner. They find justification in the fact that sitting for a long period is hard for them; provided that everything is normal they could have been released home earlier. 5 (3, 4%) of the patients think that 2-hour period is too short and that they should have stayed in the outpatient clinic longer due to fear of some kind of complications.

Negative comments in previously mentioned research in Great Britain referred to the waiting period for being released from the clinic, which in some cases was two hours. The rest of negative comments were made about the lack of information provided about postoperative treatment of the eye [13].

By analyzing the obtained results at the Eye Diseases Clinic, we can conclude that providing correct and relevant information to older patients who need cataract surgery is essential in promoting their independence and lowering their anxiety levels. Nurses play an important role in providing help and support during preoperative processing as well as pre and post operative phase of the cataract surgery.

The main responsibility of the nurse is providing information by efficient communicational skills, which, as research has shown, was very important to patients. Time spent with the patients as well as providing information decrease levels of fear and anxiety caused by surgery. Providing “extra information” influences greater patients' satisfaction.

Key focus of the research conducted at Eye Diseases Clinic of “Sveti Duh” Clinical Hospital is the question about patients' overall satisfaction with one-day cataract surgery.

There is a statistically significant difference in distribution of patients in respect to overall satisfaction with one-day cataract surgery. 130 patients (out of total 149), i.e. 87, 2% of them, is satisfied with cataract surgery and the “treatment” they went through, they are followed by those who are somewhat satisfied, 12 (8, 1%) of subjects. The smallest number of subject is somewhat unsatisfied with the surgery. And the most important fact is that none of the patients were unsatisfied with the cataract surgery.

Hypothesis of the conducted research was confirmed, patients are satisfied, which is supported by the results. Research shows that cataract surgery and stay in outpatient clinic was generally good experience for the patients (with minimum of unwanted occurrences). Specific aspects like coming to the hospital early in the morning, transport organization, coming for control check up the day after the surgery were taken into consideration.

Taking into consideration everything stated, there were no major problems.

Cillino and colleagues conducted a research in Italy in 2007, at several different hospitals, with the aim of establishing quality of one-day cataract surgery. Obtained results show that the degree of patients' satisfaction is greatly influenced by whether doctors, nurses and other staff are friendly, nice and empathetic. This research shows that patients' satisfaction is influenced by similar aspects that influenced satisfaction of subjects who took part in research

conducted at CH "SvetiDuh" [14]. By analyzing gathered data, we have established that patients' satisfaction is influenced by kindness of healthcare workers, as well as providing relevant information during the procedure. Only one patient who took part in this research was not satisfied with the information provided by the nurse and the doctor. All the other patients were satisfied.

Cabric and colleagues have conducted a similar research in 2014. Working group were the patients in public health facility Dobož-Jug. Control group were the patients in Eye Diseases University Center Clinic in Tuzla, Bosnia and Herzegovina. The aim of this research was to establish safety and efficiency of one-day cataract surgery in developing countries. The research included 200 patients divided into two groups; patients who underwent one-day cataract surgery and patients who were hospitalized for the cataract surgery. Both groups met the conditions of representative sample; they both had same surgical and postoperative conditions. The results have shown that one-day cataract surgery is equally safe, but more profitable than patient's hospitalization for cataract surgery [15].

Besides establishing degree of patients' satisfaction with one-day cataract surgery, the other aim of the research was to discover critical points which would be basis for further improvements. Taking into account the results of the survey, a slightly bigger number of patients thinks that coming for preoperative processing seven days prior to operation 40 (27% of them), coming to hospital at 8:30 AM on the day of the surgery 20 (13, 4% of them) and coming for the first control check up the day after the surgery 28 (18, 8%) is exhausting in some ways.

Smaller number of subjects considers coming in for preoperative processing very exhausting. It is visible from the questionnaire that those are elderly patients who have locomotive difficulties. That could be improved in such a manner that the clinic organizes preoperative processing and cataract surgery on the same day for the smaller number of elderly people and those who have locomotive difficulties.

The other "unsatisfied" group consists of the patients who find it exhausting coming to the clinic early in the morning on the day of the surgery. Those patients need to be advised that it is necessary due to work organization within the clinic.

Cooper and colleagues conducted a research titled „Development of day case cataract surgery „ and have proven organizing transport to the hospital does not represent a problem for the patients. Most of the surgeries are performed during the afternoon hours. That way patients bypass morning traffic jams and it leaves the possibility for their friends or members of their families to pick them up from the hospital after work [7].

When coming for control check up the day after the surgery is considered, abroad nurses visit the patients as part of community-health services. If they do not observe any complications (redness, swelling, or the patient does not complain about any complications) during their first visit, there is no need for the patients to come to the hospital the next day [16].

Data shows that majority of patients 62 (66% of them) considers the second eye surgery was much harder than the first one. Analyzing data, it is visible that patients react to pain differently and have different experiences and cognitions of pain during the first and second eye surgery. Successful pain treatment provides faster recovery with lower complication frequency.

Ophthalmology nurses need to possess theoretical knowledge and skills to prevent postoperative pain in order to observe it in time and start interventions which will lower pain levels and heighten levels of welfare. Education has the greatest level of importance for understanding working processes of medical nurses/technicians.

Previously stated opens new questions and leaves space for new research work. Results of the research can serve as a platform for conducting descriptive studies which play an important role in nursing, but there were very few of them so far.

5 CONCLUSIONS

On grounds of conducted research and obtained results, the following conclusions can be drawn:

- Majority of patients 130 (87, 2%) are satisfied with cataract surgery and "treatment" they went through during one-day cataract surgery.
- The greatest reflections of patients' satisfaction are kind healthcare worker and quality and relevant information during preoperative checkup as well as on the day of the surgery.
- Patients mainly emphasize "same points" which represent the small number of the unsatisfied. Those are: transport organization, coming in for preoperative assessment as well coming to the clinic early in the morning on the day of the surgery, as well as coming for control checkup the day after the surgery.
- Despite mentioned deficiencies, majority of patients opts for one-day cataract surgery because it does not require hospitalization, it does not disrupt everyday routine and it leaves the possibility of recovery at home.
- Obtained results indicate the need for constant monitoring of patients' satisfaction with one-day cataract surgery, so eventual dissatisfaction could be determined and prevented in time.

6 WHAT WAS KNOWN?

Loss of vision can be very stressful and cause anxiety which in turn creates a loss of independence and self confidence in the elderly. Effective communication and giving correct information during the operative and post-operative phase are essential in calming down the patient's anxiety during the operation and increasing their understanding and confidence.

7 WHAT THE PAPER ADDS?

The goal of this paper is to explain that steps in operation, decreasing the anxiety and securing that the patient in the future arrives for regular ophthalmological checkups. Nurses can by giving timely information help with patient recovery and help with giving the best possible outcome of the operation. Research has showed that the satisfaction of patients is most affected by the courtesy of the healthcare workers in the treatment which occurs within the cataract surgery. There is a need for nurses to continue to increase their degree of knowledge about the procedures for conducting health care. Learning has the highest degree of significance for understanding the work process of a nurse. The previous information opens new questions and opportunities for further research papers. The results of the carried-out research can serve as a platform for conducting descriptive studies which for nurses would be of huge importance which are not carried out in Croatia more specifically in surgery.

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