

Application of Preoperative Visits during the Perioperative Period of Ophthalmic Surgery

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Abstract

Purpose: To evaluate the effect of preoperative visits on patients' psychology, physiology, and behavior during the perioperative period of eye surgery under local anesthesia, with the aim of enhancing patients' cooperation with the surgery and improving their degree of satisfaction.

Methods: A total of 240 patients scheduled to undergo eye surgery between August and October 2013 were randomly divided into an observation ($n = 120$) and a control ($n = 120$) group. Patients in the observation group attended preoperative visits with nurses and received conventional nursing care. The control group received only conventional nursing.

Results: The Zung self-rating anxiety scale (SAS) scores were significantly lower in patients from the observation group than in the control group ($P < 0.05$). Surgeons operating on the observation group were more satisfied with their patients' cooperation with the surgery than were surgeons operating on the controls ($P < 0.01$). Patients in the observation group had a significantly higher degree of satisfaction in terms of work efficiency in the operating room ($P < 0.01$).

Conclusion: Preoperative visits by patients scheduled to undergo eye surgery can effectively mitigate preoperative anxiety in those patients, build up a positive attitude toward the upcoming surgery, instruct the patients to coordinate with the surgery, enhance surgical safety, and improve the patients' degree of satisfaction regarding the nursing care in the operating room. (*Eye Science* 2015; 30:56–59)

Keywords: preoperative visiting; scheduled surgery; surgery; nursing

Introduction

The scheduling of preoperative visits is a process

that integrates and applies medicine, psychology, and sociology into nursing care following surgery. The aim of preoperative visits is to mitigate preoperative pressure and anxiety in the patients, thereby ensuring the success of the surgery and accelerating postoperative recovery¹. These visits not only accommodate the standard of modern medicine, but also alter the conventional working pattern of the nurses in operating room. At present, preoperative visits have been widely applied in multi-level hospitals in China. They are also a key element in the delivery of high-quality nursing service.

A majority of ocular surgeries are performed under local anesthesia and the patients are conscious during surgery. The surgeons require the patients to cooperate with the surgery; therefore, preoperative visits can enhance the patients' level of cooperation intraoperatively. In the present study, 240 patients scheduled to undergo eye surgeries between August to October 2013 visited the operating room before surgery, with relatively good effects on subsequent patient cooperation.

Materials and methods

General data

Of the 240 patients enrolled in the study, 102 underwent cataract surgery, 27 glaucoma surgery, 36 pterygium surgery, 55 vitreoretinal surgery, 8 endonasal dacryocystorhinostomy, 6 ocular muscle surgery, 4 conjunctival surgery and 2 orbital surgery. All participants were randomly divided into the observation and control groups ($n=120$). Of these, 113 were male and 87 female, aged 21-88 years, (mean 62 ± 6.5 years); 123 right eyes and 77 left eyes underwent operations. Operative time ranged from 8 to 150 min (mean 48.10 ± 18.6 min) in the observation

group and 10 to 128 min (mean 56 ± 15.4 min) in the control group. Patients' ages, genders, education levels, and operative times did not significantly differ between the two groups (all $P > 0.05$).

Measurement of anxiety

The Zung SAS was adopted to quantify the level of anxiety in patients in the observation group². According to the types of surgery, circulating nurses in the operating room visited the hospital ward at 1 d before surgery. Upon entry into the operating room, circulating nurses instructed the patients on how to fill out the Zung SAS and the results were collected and evaluated by appointed staff.

Patients in the control group received conventional nursing care only, before surgery. The ward nurses implemented their duties and delivered preoperative education strictly according to medical advice.

Observation of physical signs

Physical signs in each patient were measured and recorded by the nurses at preoperative 1 d and when the patients were transferred to the operating room and were lying down on the operating table. Complications of hypertension were noted in 21 patients in the observation group and 18 in the control group. At 2 d before surgery, blood pressure in these patients was restored to the normal range after intake of blood pressure-lowering agents.

Preoperative visits

Before preoperative visits, circulating nurses wore uniforms and staff badges and they selected appropriate instruction manuals based upon the type of surgery. They ensured that they understood the clinical data of each patient, such as education level, occupation, family background, living habits, religious beliefs, medical history, drug allergy, and economic condition. The nurses emphasized systemic illnesses and inquired about any treatment and recovery from diseases. They also listed specific medications and instruments for subsequent surgery. First, the nurses first introduced themselves and obtained each patient's approval and cooperation. During subsequent communication, the nurses avoided the use of medical terminology to ensure good understanding. The nurses provided relevant information, including environmental conditions, surgical instruments, body postures, surgical procedures, anesthesia methods,

intraoperative cooperation, and precautions. The nurses guided the patients in how to fix their eye positions and to self-regulate emotions, and reminded the patients to remove jewelry, artificial teeth, hairpins, and other articles. The nurses accompanied the patients throughout the surgery and alleviated the patients' anxiety. The nurses also encouraged the patients to vent any negative feelings and to relax.

Intraoperative cooperation by the patients

During the surgery, the nurses helped the patients to relax, prevented them from touching their eyes, and instructed them not to blink heavily or move their eyeballs and to strictly follow the surgeons' instructions. After the surgery, the nurses reminded the surgeons to evaluate the patients' cooperation intraoperatively as satisfactory, average, or unsatisfactory. The circulating nurses carefully observed the patients' behavior and cooperation with the surgery and recorded any adverse events, such as shaking of the head, winking, unqualified fixation of eye position, talking, or irritation.

Postoperative degree of satisfaction among the patients

Postoperative follow-up was conducted based on the type of surgery, generally within 1 to 3 d after surgery. Each patient's degree of satisfaction was evaluated using a self-designed questionnaire.

Statistical analysis

SPSS 19.0 statistical software was used for data analysis. Measurement data between the two groups were analyzed by a *t*-test, and enumeration data were statistically analyzed by a *chi*-square test. A value of $P < 0.05$ was considered as statistically significant.

Results

Comparison of the level of anxiety before surgery between the two groups is illustrated in Table 1. The mean SAS score was significantly lower in the observation group than that in the control group ($P < 0.05$).

Table 1 Comparison of preoperative level of anxiety between two groups (mean \pm SD)

Group(n)	Mean SAS score on day of surgery
Observation group(120)	31.79 \pm 7.98
Control group(120)	38.64 \pm 8.38
<i>P</i> value	<0.05

Table 2 Comparison of changes in physical signs at different time points between the two groups (mean±SD)

Group	n	1 d before surgery			After entering operating room		
		Systolic pressure (mmHg)	Diastolic pressure (mmHg)	Heart rate (times/min)	Systolic pressure (mmHg)	Diastolic pressure (mmHg)	Heart rate (times/min)
Observation group	120	121.46±15.18	73.75±10.12	81.63±8.66	122.06±13.17	71.33±11.53	84.14±7.43
Control group	120	125.53±10.32	72.83±8.40	78.55±9.43	138.05±14.05	78.48±12.13	95.29±6.62

Physical signs at that preoperative 1 d did not differ significantly between the two groups ($P>0.05$), as shown in Table 2. In the observation group, each parameter measured after entering the operating room did not differ from that detected at 1 d before surgery (all $P>0.05$). By contrast, the control group showed significantly higher values for all measured parameters after entering the operating room than 1 d before surgery (all $P<0.01$).

As shown in Table 3, the surgeons' degrees of satisfaction with their patients' intraoperative cooperation was higher than 80% in both groups. A slightly higher degree of satisfaction was reported for the observation group than for the control group.

Table 3 Surgeons' degrees of satisfaction with the patients' cooperation during surgery in the two groups (n/%)

Group	Satisfactory	Average	Unsatisfactory
Observation group (n=120)	108(90)	10(8.3)	2(1.7)
Control group (n=120)	98(81.7)	16(13.3)	6(5)
P		<0.01	<0.05

According to the results of Table 4, the number of cases who showed uncooperative behaviors intraoperatively was significantly smaller in the observation group than in the control group ($P<0.05$).

As illustrated in Table 5, the degree of satisfaction of the patients group was clearly higher in the observation group than in the control group ($P<0.01$).

Table 4 Comparison of uncooperative behaviors during surgery between the two groups (n/%)

Group	Uncooperative behaviors
Observation group (n=120)	16
Control group (n=120)	39
P	<0.05

Discussion

Preoperative visits are a form of patient-centered

Table 5 Comparison of patients' degrees of satisfaction with surgical efficacy (n/%)

Group	Satisfactory	Average	Unsatisfactory
Observation group (n=120)	114(95)	5(4.16)	1(0.83)
Control group (n=120)	102(85)	15(12.5)	3(2.5)
P	<0.01	<0.05	<0.05

nursing service and represent a novel nursing concept for the nursing staff in the operating room³. Preoperative visits not only decrease the patients' stress responses to surgery, but also strengthen the patient-nurse relationship, enhance the patients' degree of satisfaction with the nursing care, improve the overall quality of nursing, and alleviate patients' anxiety.

Surgery is a source of distress and severely affects patients both physiologically and psychologically⁴. Most ocular surgeries are performed under topical anesthesia, so the patient is conscious throughout the operation. The extent to which the patient cooperates with the surgery is directly correlated with the environment of the operating room and the patient's mood and anxiety. Tables 1 and 2 show that multiple measures, such as a preoperative visit, an introduction to the operating room environment and equipment, a discussion of the surgical skills of the surgeons, and an explanation of intraoperative cooperation and intraoperative discomfort, should be undertaken before surgery to enhance mutual trust between the patient and the medical staff and to increase the patient's sense of safety during the surgery, thereby mitigating anxiety and reducing the potential for adverse patient behaviors during the surgery. Eye diseases affect the eye, but can also cause a variety of other symptoms, such as headache, dizziness, nausea, and blurry vision. An affected patient may be blind and have difficulties with physical activity. The patient may lose confidence and feel anxious about daily life. Therefore, preoperative visits can allow nurses to elaborate explicitly about the necessity and

importance of the surgery and the severity of the eye disease, so that each patient understands the treatment and prognosis, and to help restore patient confidence. The nurses can utilize psychological intervention to relieve the patient's anxiety and to promote active cooperation with surgeons and nurses for successful completion of the surgery.

During the preoperative visit, the nurses can evaluate the patient's baseline data, allergy history, and surgical approach, thereby effectively averting the risk of medical malpractice. Preoperative visits also facilitate preoperative preparation and intraoperative cooperation. Nurses should communicate with the surgeons regarding the specific requirements of each surgery and undertake preoperative preparations as soon as possible, which will guarantee surgical success and save nursing time.

The ability of a patient to cooperate during local anesthesia surgery directly affects the success of the surgery. If the patient cooperates, the surgery can be completed successfully and accurately. This is especially the case during highly demanding eye surgeries, such as fundus surgery. In this comparative study, although the surgeries were successfully performed in both groups, the incidence of uncooperative behaviors was significantly lower in the observation group than in the control group, which improved surgical safety and enhanced the surgeons' degrees of satisfaction with their patients' intraoperative cooperation.

During preoperative visits, nurses in the operating room have an opportunity to communicate with their patients and understand their patients' physical conditions⁵. Similarly, patients can establish a certain understanding about the nurses in the operating room. Both nurses and patients establish mutual trust during preoperative visits. Because the nurses accompany the patients throughout the surgery, the patients tend to have a higher sense of security during the operation. The preoperative visits allow the nurses to determine each patient's specific requirements during surgery and to offer possible assistance to resolve any problems, which significantly enhances the patient's degree of satisfaction with the nursing service.

Nurses are able to put their theoretical knowledge

into nursing practice during the entire process of preoperative visits. Most patients might become excessively concerned about surgical pain, operative time, and clinical efficacy. Hence, nurses are required to possess solid professional, psychological, legal, and even social knowledge. They must acquire effective communication skills and be patient and sympathetic; this is especially the case for nurses in the ophthalmology department because a large proportion of these patients are elderly. For proper completion of preoperative visits, nurses ought to take the initiative to learn theoretical knowledge and put it into clinical practice, pay attention to academic progress, widen their perspectives, and advance their own overall personal growth.

Conclusion

Eye surgery is crucial in the treatment of most ocular diseases. The preoperative visit is now one of the major tasks undertaken during perioperative period, and it can mitigate adverse events, improve surgical safety, strengthen nurse-patient communication, and enhance the patient's degree of satisfaction. Together with the transformed medicine pattern, the procedures used for preoperative visits can be modified and standardized to provide high-quality individualized nursing service and to establish a harmonious patient-nurse relationship.

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