

# The Management Pattern Carried Out in a Cataract Surgery Day Ward

Jing Lin, Xiaoqun Fang, Suhong Wu\*

Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou 510060, China

## Abstract

**Purpose:** To evaluate the management practice and process of a cataract surgery day ward.

**Methods:** From January to December in 2012, a portion of the cataract patients were evaluated for the pattern of day ward management. Methods were as follows: 1) Establish the cataract day ward. 2) Enroll the patients who met the following criteria: voluntary, local residents or outsiders who stayed in a hotel near the hospital, accompanied by family, and who had simple senile cataract without any systemic major diseases. 3) Establish the hospitalization process. 4) Analyze the nursing process. After cataract day surgery, the patients were followed for 2 hours and completed a questionnaire about their needs and sentiments.

**Results:** A total of 3971 cases were observed in this study; 49 cases were switched to a normal pattern of hospitalization because of operative complications, 1 case had a strong desire to switch to a normal pattern of hospitalization because of ocular discomfort, 8 cases went back to the hospital for treatment because of ocular pain, and 52 cases called on the phone to seek help. Overall, 3820 cases (96.2%) returned on time the next day to visit the doctor. No patients showed severe postoperative complications and 98% expressed great satisfaction with the day ward process. Only 200 cases expressed great concern about not knowing how to deal with postoperative pain, the changes in condition outside the hospital, the therapeutic effects, and the problem of expense reimbursement.

**Conclusion:** Day ward cataract surgery is an efficient and safe mode, and has the potential to relieve the demand for inpatient beds and to ensure timely treatment of the patients. In addition, it helps the patients enjoy health care at public expense, reserving reimbursement for those who need to be hospitalized. Nurses should pay more attention to systemic evaluation of the patients, health education, and psychological guidance, and keep in close communication with doctors, which is the key to ensure the safety of day ward practice.

(*Eye Science* 2013; 28:79–83)

**Keywords:** cataract surgery; day ward; management pattern

Cataract is the top blinding eye disease in the world<sup>1</sup>. Phacoemulsification combined with implantation of an artificial lens has become the main surgical method to treat cataract in the last 20 years and is popular nationwide. The rapid development of medical techniques and equipment is steadily improving the effectiveness and safety of phacoemulsification. Cataract surgery is now approaching the minimally invasive mode, which means that the nursing concept of perioperative care should be changed.

Traditional thinking holds that patients undergoing surgery need to stay in the inpatient ward. In addition, the rules of free medical service and social medical insurance mean that most cataract patients are treated in the inpatient ward. In order to relieve the pressure caused by limited bed capacity, and also to reduce the patient's concerns regarding expensive reimbursement, our cataract surgery department decided to run a selective test using a hospitalization mode of the day ward, beginning in January, 2012. To study the future potential and the administration of this hospitalization mode, we analyzed the nursing process of the day ward patients and conducted a questionnaire of the patients' needs and sentiments. The report is stated as follows.

## Material and methods

**Definition of day ward management:** all preoperative assessments and examinations were completed before the patients were admitted to our department. The patients underwent cataract surgery on the day of admission. After surgery, they stayed in the day ward for observation for 2 hours, received essential

medical treatment and specific health education, and were sent home or to a nearby hotel to rest. The next day, they returned to the hospital to visit the doctor and were discharged.

## Participants

From January to December 2012, 3971 cases were selected for inclusion in the study; 2976 cases were local residents and 995 cases were not. The information regarding the participants is presented in Table 1.

**Table 1** General data of day ward patients

General information	Number of day ward patients
Total number/eye	3971
Second admission	1291
Age	22–89
Sex(M/F)	2500/1471
Diagnosis	
Senile cataract	3573
Complicated cataract	317
Congenital cataract	45
Others	36
Surgery	
Phaco+IOL	3947
Small incision ECCE+IOL	24
Emergency or infection noted outside hospital satisfactory	0
Degree of satisfaction	98%
Complains	0

Second admission;request to have the other eye undergo cataract surgery.

## Preparation

After approval by the health department, health insurance department, and free medical service department, and careful discussion of the expense standard, medical record writing, we undertook day ward management. The old ward was redecorated as a day ward. Comfortable armchairs with speakers and day ward numbers were arranged. Materials used for health education were also arranged in the day ward.

## Practice

1. Staff arrangement; nurses were arranged according to the amount of surgery. The duty time was elastic. The nursing team leader, superior nurses, and primary nurses managed the day ward together.

2. Selection criterion; Based on the standard co-founded by the doctors and nurses, a number of patients who met the criteria were selected for treatment in the day ward. During the hospital stay, the nurses monitored the patients' systemic and psychological status. If any abnormal events occurred, the nurses reported these immediately to the superior nurse-in-charge. The patients were switched to a normal pattern of hospitalization if necessary. The selection criteria were as follows: 1) voluntary, local residents or outsiders who were staying in a hotel near the hospital; 2) accompanied by family; 3) without any systemic major disability; 4) without any cardiac or cerebral diseases; 5) without any serious ocular diseases; and 6) having only simple senile cataract.

3. Establishment of the hospitalization process; We established the process leading from the outpatient department to the day ward and back to the outpatient department. Each patient was under the charge of the same expert at the first visit and the return visit. We established a "green channel" for the patients for admission, to simplify the admission so that the patients could have their surgeries as soon as possible. The preoperative processing of the day ward patients was the same as the normal pattern, including bed arranging, orientation, evaluation, and vital sign measuring by nurses. The doctor-in-charge conducted the preoperative examination, obtained consent from the patient, and signed the consent form. After preparation consisting of cilia cutting, giving mydriatic drops, and irrigation of the conjunctival sac, the patients waited for surgery. After surgery, the patients were observed for 2 hours, while receiving any necessary treatment and nursing and health education. Before the patients left the hospital, the doctor examined the surgical eye under a slit light and performed an NCT measurement. The patients' surgical eyes were then wrapped and the patients could leave the hospital. A 24-hour telephone line was available to solve any patients' problems and to monitor the patients' status over time. The time of leaving and returning to the hospital was recorded. The status outside hospital was asked about and recorded by the nurses. The next day, the patients returned to the ward. After removing the eye patch and careful examination by doctor-in-charge,

the patients were discharged if no abnormal events were found. Nurses followed up the patients' situation one week after discharge by telephone, including the situation after surgery, medication, guidance in activity and reminding them of the importance of the return-visit.

4. Questionnaire; A random sample of 200 of these patients was asked to complete the questionnaire, in order to determine the patients' psychological needs.

**Results**

In total, 3971 cases were observed in this study;

49 cases switched to a normal pattern of hospitalization because of operative complications and 1 case had a strong desire to switch to a normal pattern of hospitalization because of ocular discomfort. (See Table 2).

All day ward patients were observed for more than 2 hours after surgery. The basic nursing processes were completed. Therefore, for patients who met the criteria, leaving the hospital did not affect their post-operative treatment or nursing. We evaluated the nursing records of the day ward patients; the results are shown in Table 2.

As a new medical pattern, day ward patients

**Table 2** Results summarized from nursing records

Nursing record	Analyzed results	
	Cases	Analysis
Switched to normal pattern of hospitalization	50(1.3%)	Causes: 49 cases advised by doctors because complications noted. 1 cases because of ocular pain
Returned to hospital for emergency treatment	8(0.2%)	Causes: 3 cases have ocular pain caused by IOP elevated, treatment for lower IOP were given. 5 cases have burning pain, no special treatment were given after examination.
Consulted for information through telephone	52(1.3%)	Consult about postoperative discomfort, whether some systemic drugs were appropriate, whether some specific diet is appropriate etc.
Emergency or infection noted outside hospital	0	0
Returned to hospital on time the next day	3820(96.2%)	Great ocular condition, no need to have further treatment.(3809, 99.7%) Postoperative complication noted, need further treatment.(11, 0.3%)
Didn't return to hospital on time the next day	151(3.8%)	Causes: Too far away from the hospital/ traffic jam(148, 98%) Not willing to return because of good therapeutic effect(2, 1.3%) Not knowing they should be return(1, 0.6%)

might have more concern about the curative effect of the surgery and postoperative treatment. In the process of practice and generalization of this pattern, we not only needed to guarantee the nursing quality, but also to remain concerned about the psychological needs of the patients. We randomly asked 200 patients to complete a questionnaire. The results are presented in Table 3.

**Discussion**

**Advantages**

1. Relieving the demand for inpatient beds and increasing the turnover rate of the beds. As the aging process is increasing in our population, we will be

treating more and more cataract patients. In order to relieve the pressure this puts on inpatient beds and to shorten the waiting time for the patients, our cataract department selectively conducted this day ward pattern for some patients. From January to December 2012, more than 8000 cataract surgeries were completed, an increase of 1500 cases compared to 2011. The day ward pattern can allow us to receive more patients and increase the turnover rate of the beds. For patients, the day ward pattern can fulfill their needs faster and more effectively. For the hospital, the economic and social benefits are greatly improved.

2. Fulfill the needs of patients and patients' fami-

**Table 3** Questionnaire results for 200 patients

Questionnaire items	Result		
Whether the nurses have explain the treatment and nursing process clearly enough	Very clear (170, 85%)	Clear, but with doubts (24, 12%)	Unclear(6, 3%)
Satisfaction to day ward environment	Satisfied(190, 95.7%)	OK(8, 4%)	Not satisfied(2, 0.3%)
Whether feel concern about leaving hospital	Not worried(178, 89%)	Have concern, but no specific reasons(14, 7%)	Have big concern, because of therapeutic effect and ocular pain(8, 4%)
Ocular discomfort and treatment while leaving hospital	No discomfort, no further treatment needed(195, 97.5%)	Have discomfort, consulted through telephone, proper treatment was given(2, 1%)	Ocular pain noted, given treatment on time (2, 1%) Not given treatment on time and no telephone consult(1, 0.5%)
Systemic discomfort and treatment while leaving hospital	Systemic status were good. No discomfort.(197, 98.5%)	Hypertension or other disease, get treatment in time after consult through telephone.(3, 1.5%)	Have systemic discomfort and not getting treatment in time(0)
Sleeping quality	Good (186, 93%)	OK (10, 5%)	Poor (4, 2%)
Anxiety and causes	No anxiety (173, 86.5%)	Little anxiety (15, 7.5%)	Medium to severe anxiety: worried about therapeutic effect (5, 2.5%), about not having nursing in time (7, 3.5%)
Other concerns	Whether the expense can be covered by medical insurance. (88, 44%)		

lies. The nursing service becomes more individualized and humane. Because most of the cataract patients are elderly people whose sleep quality is easily disturbed by other patients staying in the same unit, the day ward pattern allows those patients to go home or to a hotel to rest after surgery, so that they can get better sleep. The patient's family has an easier task to take care of them at home and they do not have to stay at the hospital for a long time. The patients also will not feel insecure about not having family around after the surgery. Therefore, the day ward pattern is more humanized. After conducting the day ward pattern, the satisfaction of the patients was greatly improved.

3. Fulfill the patients' needs for expense reimbursement. Patients in our country usually have to be hospitalized so that their medical insurance will cover the expense. After communication with the Bureau of Medical Insurance, the day ward pattern was determined to have the same hospitalization process as the normal pattern so that the expense reimbursement was not affected.

### Limitations and problems

Successful day ward patterns have been reported abroad, but mostly in oncological or pediatric wards<sup>2-6</sup>. Cataract surgery is an intraocular surgery, which traditionally requires hospitalization. The im-

provements in surgical technique have now made cataract surgery (especially phacoemulsification) minimally invasive, effective, and safe. For this reason, some medical institutions in developed countries now allow cataract surgery to be performed as outpatient office surgery, but these countries have higher standards for operation rooms and postoperative nursing. In our observation, we discovered some shortages and problems which can be improved.

1. Improve the nursing instruction for the patients in order to avoid adverse events. According to our questionnaire, 11% of the patients complained of "not feeling safe" leaving the hospital. Therefore, giving sufficient health instruction should come first. Nurses should explain that cataract surgery is safe, minimally invasive, and has few complications. The patients should be allowed to rest at home with ease. Also, any possible discomfort should be explained. If the patients experience foreign body sensations and lacrimation, they do not have to panic because these are normal after surgery. However, when they experience severe ocular pain, gas pain, or vomiting, they need to go back to the hospital to be checked. In our study, 52 cases complained of ocular discomfort and telephoned the ward for advice. After explanation, their worry was relieved; 8 cases came back to the hospital because of obvious discomfort. After

proper treatment, they went back home to rest.

2. Close cooperation with doctors, and preparation for dealing with emergencies. In our study, 49 cases showed operative complications. The doctors suggested that they be switched to normal pattern hospitalization for safety. Therefore, when conducting a day ward pattern, the head nurse and the nurse-in-charge should always be prepared to switch to the normal pattern of hospitalization should severe complications occur. It is not easy keep an empty bed for this because of the demand for inpatient beds. To solve this problem, we have taken the following measures: 1) Close communication with doctors, trying not to admit complicated cataract patients to the day ward. 2) Patients of the less experienced doctors are not admitted to the day ward. 3) When severe complications happen and no empty bed is available, the chief resident and nursing department are contacted to help us arrange a bed in another ward. The patient can then be switched back to our department the next day.

3. Keep complete nursing records and pay more attention to safety. Although the stay time for the day ward patients is short, the nursing record must be complete. The time of leaving and return to the hospital should be recorded. Patients' discomfort and sleeping quality should be asked about and recorded. We also set up a telephone line specifically for patient consultations. The completed nursing record is also an important measure for self-protection of our hospital. The patients should be informed about the day ward staying process and the nursing expense. A consent form should be signed to avoid legal problems.

4. Improvement of the ward environment and equipment. Because the residential density of the day ward is higher than normal wards, sterilization and cleaning have to be done on time. After all the patients have left the day ward, the ward should be disinfected by ultraviolet light.

## Conclusion

Cataract surgery is one of the most important procedures for preventing blindness<sup>7</sup>. In most ophthalmic institutions, cataract surgery accounts for 52-55% of

the total surgeries performed. The rapid development of medical techniques has confirmed the effectiveness, safety, and minimal invasiveness of phacoemulsification. Therefore, the nursing concept of perioperative procedures should be changed. This study of a day ward pattern follows this concept.

We were happy to discover that, in our observation, most of the patients were willing to attend a day ward pattern after our careful explanation. Conducting the day ward pattern can greatly relieve the demand for inpatient beds and improve the numbers of surgeries performed. However, some problems still remain that require improvement, such as the day ward institution, admitting process, service pattern, postoperative nursing time, and nursing records. In the management of a day ward pattern, treatment after the operation is conducted by nurses, which makes nurses an important connection between the doctors and patients. Nurses who give clear explanations, sufficient health education, and nursing guidance can help the patients to fulfill their needs. Keeping close communication with doctors and preparing for emergencies are the key to a successful cataract surgery day ward.

## References

- 1 Resnikoff S, Pascolini D, Mariotti SP, et al. Global magnitude of visual impairment caused by uncorrected refractive error in 2004. *Bull World Health Organ*, 2008, 86:63-70.
- 2 Kirkwood BJ, Pesudovs K, Latimer P, et al. The efficacy of a nurse-led preoperative cataract assessment and postoperative care clinic. *Health Care MJA*, 2006, 184: 278-281.
- 3 Liu LJ, Hua YP, Zhao XH, et al. Establish day hospital for the need of society. *Chin J Nursing*, 2001, 03:42-43.
- 4 Niu H, Song JP. Discussion on establishment of pediatric day ward. *Shanxi Med J*, 2007, 36(11):927.
- 5 Zheng CZ, Zhang J, Sun YP, et al. Foundation and Management of Diagnosis-treat Model of Pediatric Intra-day-ward. *Hosp Admin J Chin PLA* 2002, 9(3):207-208.
- 6 Yu XJ, Zhang WD. Management of tumor chemotherapy patient in the day care. *Mod Prevent Med*, 2007, 34(22): 4319-4321.
- 7 Zhao JL. Prevention of blindness is still an arduous task and embarks on a long road in China. *China Ophthalmol*, 2012, 48:193-195. wer by YOZOSOFT