Studying on the Effects of Family-centered Care Program on the Incidence of Early Complications of Cataract Surgery

Introduction and Purpose

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Abstract

Introduction Family members are one of the basic components of patient care system undergoing Cataract surgery. Planned care to patient and their families increase awareness and knowledge and reduce their problems significantly. Candidate patient and their family should be educated to side effects of Cataract surgery, advantages and disadvantages of surgical and postoperative care, surgical procedures, types of anesthesia, medication and symptoms of post-operative, duration of antibiotic use, and they have been trained clearance and follow up.

Method: In this quasi-experimental study with gradual sampling, 80 patients referred to the clinic of Urmia Imam Khomeini Hospital, 40 patients were educated intervention and control groups. After obtaining informed consent and research goals for intervention group with family participation and according to the developed protocol, the family-centered teaching booklet was presented and the control group received routine care. Finally, the incidence of early complications in both groups were examined. the obtained information by using SPSS software and descriptive and inferential statistical tests were analyzed.

Results: The results of the present study shows that amount of incident of early complications in the intervention group in comparison with control group has declined in the most sides of research, so this reduction is eye discharging in first and third week and it`s tearing in the third week.

Conclusions: The result of this study will be concluded that family-centered cares includes training package to patient and their families has reduced the complications and problems of surgery. therefore, it is recommended that written educations all ophthalmology clinics and hospital wards be made available to patient and their relatives.

Keywords: Nursing care plan, Home care, Cataract surgery, Complications.

Introduction

Cataract is one of the largest and the most common cause of blindness in Asia as well as in the world so it is incontinent and can be prevented [1-9]. Cataract is the second cause of blindness, inability to vision caused by Cataracts a clouding of crystalline lens that is transparent in normal mode and it passes the light from the dark area in the middle of the iris. This disease doesn’t let the light passes the opaque lens and caused vision problems, which often occurs with age [9-11], the World Health Organization said that Cataract is the 48% of the blindness and has predicted that in 2020 nearly 54 million people older than 60 years will be blind, and this increase will be seen in the elderly population in the developing and developed countries [9-12]. Cataract caused 30 to 60 percent of blindness in Africa [13], and 9
Cataract caused 37% of blindness among natives of Australian, and occurs 12 times more common in people and this pattern shows the need for development and make the correct understanding of eye services in Australia [15] Cataract divided in three terms of kind: nuclear, Cortical and under the posterior capsule and intensity in four categories: moderate, clear, sharp split.

Diabetes Miletus, medications such as corticosteroid or other thiazides, radiations, smoking, alcohol consumption, diet with low Antioxidant (Vitamin C, Vitamin E, Carotenoids) [10-12] the most common type is the risk of age-related Cataract The average age of onset of Cataract is 64-65 years [11-12].

The signs of Cataract disease are loss of vision, vision problems and blurred vision, Cataract is the most common surgery in developed and ongoing countries [1]. In America, more than 1.35 surgery was conducted in 1990-91 years by doctors and made it the most common surgery for American people with older than 65 years.

Yearly 10 million Cataract surgery done in the world [11-16-17], despite the low rate of postoperative complications again [17], some problems may occur after surgery in patients these complications include complications early, subacute and chronic [18].

Many of these complications are preventable with educational plans to patient and their family. The effects of factors such as patient-related factors (age race-gender)and the factors (insufficient experience in surgery) depends on doctors[18]. Due to the high number of elderly is to prevent complications of diseases, despite numerous eye surgeries, quantitative research is done for the role of training before and surgery [19-20-21].

One of the main obstacles for eyes surgery lack of knowledge about tasks and measure that should be done at home before and after operation. These programs are costly and reduce the effects have a huge impact on increasing community awareness [11-20-22].

Family-centered patient care as strategy to plan and deliver and evaluate health care that is founded on the basis of mutually beneficial partnership between the clinic and the family [23].

This is great benefit for family care, including helping to maintain family ties, skills and competence to care after discharge and feeling of security. Today's the majority of cases, Cataract surgery is done on an outpatient basis and patient are discharged from hospital after surgery. Therefore, the necessary training to patients and caregivers and awareness of the changes and conditions after surgery so helps to reduce the patient’s anxiety and their family [10].

Knowledge about diet, injury, infection or ointment eye drops pouring techniques and how to use it after clearance trained by nurses and caregiver and adequate instructional and effectively help prevent complications improve quality of life in patients after surgery and will be prevent blindness in the World Health Organization in 2020 [12-24-25].

Method

The methods of this study is quasi-experimental study in which 80 patients were divide in two groups of intervention and control. The study population consisted of patients hospitalized in Imam Khomeini Hospital that they are undergoing eye surgery. According to the study by Scott Hickman to persons is considered for each group. Sampling of patients that were eligible for inclusion was gradual approach and then they were divided in 2 groups of 40 persons randomly [25].

The way the study was that in the first stage researcher after obtaining permission from university ethics committee and giving introduction from Imam Khomeini Hospital and refers to the research environment. visiting the centers and coordination with samplers has done in charge of that center.

Research after his introduction to the samples and explain in the objectives and methods of research work that based on the time of surgery patients, he delivered demographic questionnaire to the both
groups and the questionnaire was completed by patients and their family.

The data and demographic that includes personal information and sampling patients information that was designed by researcher to determine the validity of the training program under the guidance of professors and advisors using literature and book patients and their families.

Despite numerous studies in the area of medical sciences in clinical (26-27), educational (28-29) and service fields (30), very little researches have been done in this area.

To ensure the validity and reliability of methods used Cronbakh’s alpha coefficient, to achieve the research objectives in the form of tables and graphs, descriptive statistics and T test and chi-square test was used. To avoid bias first questionnaires were filled out by control group; at this point the researcher came to the intervention group and for each of the patients and their family on the basis of the training check list and face to face education is already prepared.

The intervention group received training and family centered care in four steps before bed while hospitalized, clearance and training. All the tasks in control group and the hospital routine eye surgery was performed according to the normal procedure, each of the patients were based on the time of operation for month and week to week in terms of the incidence of side effects.

**Results**

Result showed that mean age of patients in the intervention group versus 10.977± 68.25 and 11.63+ 67.85 in control group. This age differences in the two groups are identical (p=0/875).

In the intervention group, 20(50%) men and 20(50%) were women, while in the control group 18(45%) were male, 22 (55%) were female. In the intervention group 17(42.5%) illiterate. 9 (22.5%) elementary, eight (20%) tips and 6 (15%) had a college education while in the control group 29 (72.5%) have university education.

In intervention 5th group (12.5%) unemployed .12(30%) free. 2(5%) employees three (7.5%),one (2.5%) retire and 20 (50%) were housewives. In the intervention group, 13 (32.5%) smokers, 27(67.5%) were non-smokers while in the control group, 11 (27.5%) smokers and 29 (72.5%) were non-smokers.

In the intervention group, 26 (65%) living in city and 14(35%) were from rural areas, while in the control group 23(57.5%) living in city and 17 (42.5%) lived in rural areas.

In the intervention group, 29 (72.5%) Azeri, 11(27.5%) Kurdish, 0 (0%) were Assyrian, while in control group, 31 (77.5%) Azeri, 8 (20%) Kurdish, 1(2.5%) were Assyrian, in the intervention group, 31 (77.5%) had diabetes and 9(22.5%) were diabetic, while in the control group 35 (87.5%) had diabetes and 5 (12.5%) were diabetic, in the intervention group, 28 (70%) had not hypertension and 12 (30%) had hypertension, while in the control group 26 (65%) had not hypertension and 14 (35%) patient had hypertension.

In the intervention group 30 (76.9) had blood pressure of 9 (23.1) with blood lipids, whereas in the control group 34 (85 %) had blood fat and 6 (15%) were diagnosed with hyperlipidemia. In the intervention group, 39 (97.5%) had constipation and 1 (2.5%) had constipation and 2 (5%) were diagnosed with constipation. In the intervention group, 38 (95%) had kidney disease and 2 (5%) were diagnosed with kidney failure while in the control group, 38 (95%) had kidney disease and 2(5%) were diagnosed with kidney failure. In the intervention group 1 (2.5%) illiterate, 8 (20%) elementary 7(17.5%) tips.12 (30%) of high school and 12 (30%) had a college education while in the control group 1 (2.5%) illiterate. 8 (20%) elementary, 7(17.5%) tips, 10(25%) of high school 14 (35%) had university education. (Table 1)
Table 1: demographic characteristics

<table>
<thead>
<tr>
<th></th>
<th>Rank and file</th>
<th>Percentage</th>
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<tbody>
<tr>
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<td>68/05±11/238</td>
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<tr>
<td>gender</td>
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</tr>
<tr>
<td>male</td>
<td>38</td>
<td>47/5%</td>
</tr>
<tr>
<td>female</td>
<td>42</td>
<td>52/5%</td>
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<tr>
<td>education</td>
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</tr>
<tr>
<td>illiterate</td>
<td>46</td>
<td>57/05%</td>
</tr>
<tr>
<td>elementary</td>
<td>16</td>
<td>20/5%</td>
</tr>
<tr>
<td>Guidance</td>
<td>9</td>
<td>11/03%</td>
</tr>
<tr>
<td>Collegiate</td>
<td>9</td>
<td>11/03%</td>
</tr>
<tr>
<td>job</td>
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<td></td>
</tr>
<tr>
<td>Unemployed</td>
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<td>12/5%</td>
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<tr>
<td>Employee</td>
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<td>6/3%</td>
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<tr>
<td>Retired</td>
<td>4</td>
<td>5/5%</td>
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<tr>
<td>housewife</td>
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<td>47/5%</td>
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<tr>
<td>History of tobacco</td>
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<td>Smoker</td>
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<tr>
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<td>rural</td>
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<tr>
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<td>23/8%</td>
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<tr>
<td>Ashoori</td>
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<td>The Patients family education</td>
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<tr>
<td>elementary</td>
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<tr>
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<td>14</td>
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<tr>
<td>High school</td>
<td>22</td>
<td>22/2%</td>
</tr>
<tr>
<td>Collegiate</td>
<td>26</td>
<td>32/5%</td>
</tr>
</tbody>
</table>

The results of this study showed that incident of early complications in one month of the procedure in the intervention group compared to the control group.5 in the first week in the intervention group (12.5%) had ocular discharge, while in the control group, 14 (135%) had ocular secretions that this difference was statistically significant (0.018). In the experimental group 4 (10%) eye.

In the experimental group 3 (7.5%) itchy eyes and 5 in control group (12.5%) had itchy eyes. In the second week in groups of 4 (10.5%) had ocular discharge, while in the, while in the group 5 (12.5%) had ocular discharge. in the experimental group 4 (10%) were tearing while in the control group 6(15%) were tearing.

In the experimental group 3 (7.5%) had ocular itching, while in the control group 5 (12.5%) had ocular itching. In the third week in the intervention group 1 (2.5%) had ocular discharge, while in the control group 7 (17.5%) patients had ocular discharge.

None of the patients had ocular, irritation in the intervention group, while the control group 1 (2.5%) had ocular irritation. In the intervention group 4 (10%) were suffering from itchy eyes.

None of the patients in the intervention group were tearing, while in the control group 5 (12.5%) patients were tearing. The incidence of ocular secretion (0.025) and tearing (0.021) was significant difference in the third week.

In the fourth week in the intervention group 1 (2.5%) had ocular discharge, while in the control group 4(10%) patients had ocular discharge.

None of the patients in the intervention group were tearing while in the control group 2 (5%) of the patients were tearing. In the intervention group 2 (5%) had itchy eyes, while in the control group 3 (7.5%) were suffering from itchy eyes. (Table 2)
Conclusion

The results showed statistical difference is between the two groups in the rate of complication. Results showed that in the majority of cases a reduction in incidence of complications was observed but in the case of ocular discharge and tearing these differences were most significant reduction in the incidence of complications was related to ocular discharge.

The present study also regarded with mini racing Mary Beth and associates found that the extent of the problem and damage in the eye in patients who have the knowledge and information on how to fold and droplets of drug use and how to wash [12].

The lowest rate of reduction in the incidence of complications related to the vision was that every four weeks in the control group compared to the intervention group did not show much change. The loss of vision mostly depends on the type of surgical technique and family care had little impact. The result of a study that Abrar Karan and his colleagues did in India showed that giving visual education to patient in the postoperative increase satisfaction and reduce complications and problems effectively [20].

Souad Hegazi and his partners research results indicated that the management of patients undergoing Cataract surgery in the term of preparation before operation and giving training about how to act and how to take care of the eyes and complications will be happened. Clearance time and training, the signs and symptoms that the patient should notify causes more confidence and satisfaction of patients and reduce the incidence of side effects, in this regard the study of Anita shokela showed that the training methods of simultaneous visual and oral surgery and the advantages and disadvantages and its complications is better than education alone and leads to satisfaction of patients [31].

It seems according to the results of these finding can be stated that a family-centered care provided to patients along with the check list and training package can update rate of complications in patients undergoing Cataract surgery.

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References


12. Lih, K.F., A Descriptive Study to Assess the Knowledge on Post Operative Self Care Activities Among patients who have undergone cataract surgery at penang adventist hospital (PAH). 2013, International Medical University.


