NURSING ACTIONS IN THE CONTROL AND TREATMENT OF CATARACTS: INTEGRATIVE REVIEW

AÇÕES DA ENFERMAGEM NO CONTROLE E TRATAMENTO DA CATARATA: REVISÃO INTEGRATIVA

ACCIONES DE ENFERMERÍA EN EL CONTROL Y TRATAMIENTO DE LAS CATARATAS: REVISIÓN INTEGRADORA

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ABSTRACT

Objective: to analyze in the literature about nursing actions in the control and treatment of cataracts.

Method: integrative review, with search in Lilacs and Medline databases and Scielo, virtual library between 2004 to 2011 in order to answer the research questions << Which is the scientific production about the surgical treatment of cataracts? Which are nursing actions are geared to the patient in the pre-surgical period of cataract surgery? >> A structured form was used to collect data, which covered article title, year of publication, objective of the study, study type and level of evidence. For critical analysis, the systematic characterization of publications as well as the interpretation and analysis was performed.

Results: 12 articles were selected, of which ten have cataract surgery and two nursing actions for different ophthalmic surgeries, not specifying the cataract. Conclusion: nursing actions for patient with cataracts have involved health promotion, disease prevention and pre-surgical care.

Descriptors: Cataracts; Blindness; Ambulatory Surgery; Nursing.

RESUMO

Objetivo: analisar na literatura sobre as ações da enfermagem no controle e tratamento da catarata.

Método: revisão integrativa, com busca nas bases de dados Lilacs e Medline e na biblioteca virtual Scielo, entre 2004 a 2011, com vistas a responder às questões de pesquisa << Qual a produção científica sobre o tratamento cirúrgico da catarata? Quais ações de enfermagem são voltadas ao paciente no período perioperatorio de cirurgia de catarata? >> Utilizou-se formulário estruturado para coleta de dados, que abrangeu título do artigo, ano de publicação, objetivo do estudo, tipo do estudo e nível de evidência. Para análise crítica, realizou-se a sistemática caracterização das publicações bem como a interpretação e a análise.

Resultados: foram selecionados 12 artigos, dos quais dez abordaram cirurgia de catarata e dois as ações da enfermagem para distintas cirurgias oftalmológicas, não especificando a de catarata. Conclusão: ações da enfermagem para paciente com catarata envolveram a promoção da saúde, prevenção da doença e cuidado perioperatorio.

Descritores: Catarata; Cegueira; Cirurgia Ambulatorial; Enfermagem.

RESUMEN

Objetivo: analizar la literatura sobre las acciones de enfermería en el control y tratamiento de las cataratas.

Método: revisión integradora, con búsqueda en las bases de datos de Medline y Lilacs y en la biblioteca virtual Scielo, entre 2004 al 2011, con el fin de responder a las preguntas de la investigación << ¿Cuál es la producción científica sobre el tratamiento quirúrgico de las cataratas? ¿Cuáles acciones de enfermería son orientados al paciente en el periodo perioperatorio de cirugía de cataratas? >> Se utilizó formulario estructurado para recoger los datos, que abarcó el título del artículo, año de publicación, el objetivo del estudio, tipo de estudio y nivel de evidencia. Para el análisis crítico, se realizó la sistemática caracterización de las publicaciones, así como la interpretación y el análisis.

Resultados: se seleccionaron 12 artículos, de los cuales 10 abordaron cirugía de catarata y dos las acciones de enfermería para distintas cirugías oftalmológicas, no especificando la de catarata. Conclusión: las acciones de enfermería para el paciente con cataratas envolvieron la promoción de la salud, prevención de la enfermedad y la atención perioperatoria.

Descritores: Cataratas; Ceguera; Cirugía ambulatoria; Enfermería.
INTRODUCTION

Cataracts are a serious ocular disease caused by opacification of the lens, natural eye lens responsible for focusing light on the retina. When the lens becomes opaque, no light reaches the retina in sufficient quantity, which damages the quality of vision. Over time, the cataract can become worse to cause reversible blindness.¹

Considered the main cause of curable blindness and more frequent around the world, it affects 75% of individuals above 70 years, being responsible for half of the number of blind people in the world, representing a public health problem that interferes negatively on patients’ quality of life.²,³

Blindness by cataract incapacitates the individual, increases their dependence and reduces their social condition, originating psychological, social and economic problems, because it implies in loss of self-esteem, in occupational restrictions and consequently, decreases in family income. To society, it represents onerous burden and loss of the work force.²,³,⁵,⁶

The recovery of vision for cataract surgery produces economic and social benefits to the individual, their family and community.³ However, the difficulty of access to the ophthalmologic assistance in developing countries, from individual and environmental factors, as well as obstacles imposed by the own health system, restraints the use of surgical resource at its full potential.

In front of this reality, Brazil developed a project that had a big milestone in combating blindness by cataract, instituting the joint efforts of cataract, began in Campinas by Kara-Jose et al., in 1986, and his example was expanded to the whole country through mainly of joint efforts of ophthalmology, receiving great support from the Health Ministry.⁷,⁸ Such project was disseminated not only through the country, but also by other countries.⁷

The State of Bahia was inspired in this example and the State Health Secretary (Sesab) and Government created the program Health in Motion, launched in October 2009, which aims to take health actions to various regions of the State, in need of this type of care. The action has the differential the displacement of equipment and professionals. The team is composed of medical experts, nurses and nursing technicians, that attend in regions where empty assistance exists or where the service offer is less than the demand. In 11 months, the program has conducted 42 thousand cataract surgeries, in 13 stages serving users of 356 municipalities. In September 2011, the strategy was resumed, being performed six more actions in the West and South end regions, where they made 6,142 new cataract surgeries in residents of 49 municipalities.⁹,¹⁰

In 2012, Bahia received an implement of about R$ 15.8 million for the completion of elective surgeries, which will be invested mainly in cataract surgeries. The funds will be destined for cataract surgeries, of specialty and priority procedures, in addition to other interventions.¹¹

In this scenario of relevance, in which cataract surgery has showing priority, an integrative review was elaborate from the group’s interest in verify which elective surgery that more has been held in the State of Bahia/BA between 2004 to 2011 and how occurs the performance of nursing in this context. This study presents an innovative character to this discussion area, since the few productions of nursing approaching patient care submitted to cataract surgery.

OBJECTIVE

- To analyze in the literature the nursing actions in the control and treatment of cataracts;
- To discuss about the actions of nursing in the surgical treatment of cataracts;
- To contextualize the specificities of cataract surgery and the consequences for the patient.

METHOD

Integrative review, guided by six phases: identification of the theme and selection of the hypothesis or research question for the elaboration of integrative review; establishment of criteria for inclusion and exclusion of studies/sampling or search in the literature; definition of the information to be extracted from selected studies/categorization of studies; assessment of studies included in the integrative review; interpretation of results and presentation of review/synthesis of knowledge.¹²

The guiding issues proposed for the study were: Which is the scientific production about the surgical treatment of cataracts? Which nursing actions are geared to the patient in the pre-surgical period of cataract surgery?

To identify the publications, an online search was performed, through surveys in the Virtual Health Library (VHL), on databases of Latin American Literature in Health Sciences
The step of selection of the studies involved the careful reading and critical summaries, and then the full text, by applying the following criteria: 1) Inclusion - original published studies in Portuguese, availability of summary and full text online. 2) Exclusion - studies that were not published during the period from 2004-2011, double indexing into databases which do not cover the subject. Initially, 99 studies were identified that showed the combination of descriptors and complete text in Portuguese; from these, the works that were not in the selection period, those who differed from the objective and research analysis and that one who repeated themselves were excluded. With the assessment, it was realized that only 12 of the selected studies were contemplating the desired informations. The search was carried out by online access, over the period 15 to 26 January, 2012.

For the systematic categorization of publications, a structured instrument was used containing: article title, year of publication, objective of the study, study type and level of evidence. The quality of the evidence is classified into six levels, namely: Level 1 - meta-analysis of multiple controlled studies; Level 2 - individual study with experimental design; Level 3 - study with quasi-experimental design as study without randomization with pre and post-test single group, time series or case-control; Level 4 - study with non-experimental design as descriptive correlational and qualitative research or case studies; Level 5 - report of cases or data obtained in a systematic manner, verifiable quality or program evaluation data; Level 6 - opinion of reputable authorities based on clinical competence or opinion of the expert committees, including interpretations of information not based in research.

Based on the collected data, it was possible to perform the systematic characterization of the publications, as well as the interpretation and analysis.
Following the selection criteria established previously, 12 articles were included, obtained in a systematic way of verifiable quality and gathered in a synoptic table. The following, it was established a general overview of assessed articles.

Among the texts included in the integrative review, three (25%) were published in the year 2004, two (16.7%) in the year 2005, other two (16.7%) in the year 2010, another two (16.7%) in the year 2011 and one (8.3%) article was submitted for each of the following years: 2006, 2007 and 2008.

Of the ten analyzed articles, which corresponded to (83.3%) of found works, quoting the cataract surgery, however they were built by authors exclusively doctors and medical specialists in ophthalmology residents. This author profile does not address in their goals the care they should have with the surgical patient, the guidelines and either...
the actions of nursing, responding only to one of the objectives of this study.

Considering the axis of nursing, two articles (16.7%) were selected by approach to the actions of nursing for different surgical procedures, not only to cataract surgery; one of those two works showed the importance of preoperative visit, establishing it as the first step of systematization of nursing assistance; the other study broach about nursing in outpatient surgery, emphasizing procedures and patients' needs.

Given the findings, increased efforts were needed to describe about the nursing actions in the control and treatment of cataracts. The shortage of nursing care productions with patients submitted to cataract surgery makes possible to characterize the article as innovative in their area of concentration.

**DISCUSSION**

The cataract refers to opacification of the lens, which affects the arrival of light in the retina, compromising the process of opacification of the images. Generally, its occurrence is related to aging; also risk factors smoking are considered, diabetes mellitus, the female, the use of steroids and the use of nitric oxide.

This higher prevalence of cataract in the female sex is possible because according to demographics, there are a greater number of elderly women; hormonal factors may cause a possible dry eye syndrome; and also because they are more involved in activities that require better visual and motor coordination, such as sewing and teaching the children. Besides, the character perfectionist, more pronounced in this genre, can contribute to a more active search for better visual quality.

This profile of a higher frequency in females is justified by domestic activities and teaching to the son is in the process of transformation, as these tasks are no longer unique to the female, because of the changes in which society comes through.

The treatment for cataracts correction is surgical; although there are a lot of pharmacological research searching drugs that delay the onset or progression of cataract, no agent if proved clinically useful.

The mere finding of cataract in routine examination is not surgical treatment indication. The surgery is indicated when there is decreased vision for cataract, excluding other possible causes of low vision.

According to a study conducted in Taubaté -SP, in the year 2008, the lack of information about the disease, the delay by demand of the service of ophthalmology or the delay due to the waiting list were identified as the major barriers to the cataract cure, being these factors liable to modification.

The early detection of cataract and the prior achievement of its surgery must occur in order to reduce the biological, psychosocial and spiritual impacts for these patients. This surgery should be performed before the patient is visually impaired because the reintegration to society becomes a major obstacle. The cataract is also associated with an increased mortality, the risk of falls and depression.

Initially, the surgery consisted of the simple lens dislocation stop glassy hyper-mature. The evolution of surgical technique made popular the intra-capsular extraction technique of the lens (EICC), with complete extraction of the lens through a large incision; and the implant of a new lens was not carried out. More recently, it evolves to phacoemulsification surgery, in which the lens is emulsified, allowing a smaller incision and deploying a foldable lens with less aggression to ocular structures. The safety and visual results made this choice technique and broadened the acceptance of this procedure by the population. The surgical technique with minimal handling of the previous segment performed quickly allows more than 95% of the surgeries are performed with local anesthesia.

Technological advances in surgical context mattered to the country, since it has a large number of people with cataracts. Although insufficient when compared to the number of cases, this procedure became too easy access and greater range; and studies corroborate the claim that for Brazil to compensate the emergence of new cases of cataracts, would require the completion of approximately 500 thousand surgeries per year. According to data from the Health Ministry, in 2002, by the public health system, approximately 300 thousand cataract surgeries were held, insufficient quantity to national demand.

Cataract surgeries are mostly performed in Ambulatory Surgical Centers, similar to traditional Surgical Center, which has as advantages a short time to the familiar conviviality deprivation, reduced anxiety, lower risk of contract hospital infection and decreased recovery time, in addition to the economy for the hospital, insurance and governmental institutions.

However, even cataract surgery being elective - a proposed surgical treatment, but whose realization can await more propitious
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preparing them to take on the preoperative and postoperative care, being essential that the same person who receives the guidelines prior to surgery, remains with the patient on the day and provide the care at home. This partner is essential, especially for elderly patients, because of the difficulties of self-care that this age group presents.

The nurse, in providing care in the preoperative period, has to be sure that the use of contact lenses by patients was interrupted because the lenses change the curvature of the eye and can affect the final result of the treatment. He should note also if the patient did or did not use of vessel dilator, if he is fasting during a period of at least 4 hours, if he did scalp hygiene and face before going to the hospital. The nurse also needs to be attentive to the administration of eye drops dilators, which need to be applied to every 10 minutes during four doses, at least 1 hour before surgery. Eye drops antibiotics are also administered, steroids and anti-inflammatory drugs prophylactically, to prevent infection and post-operative inflammation.\(^1\)\(^,\)\(^11\)

In the trans-operative it is important that the nurse is aware of the materials necessary for the completion of the surgical procedure and test them to make sure their functionality, in order to reduce the damage to the patient. The nurse is also responsible leading the patient to the operating room, to position, to monitor and to verify the removal of adornments, he needs to register the notes of nursing during the entire procedure and, in the end, to lead the patient to the post-anesthetic recovery room.\(^20\)

The postoperative is a recovery of the patient after anesthesia. In the first phase of the postoperative, nursing activity consists in evaluating the respiratory rate, heart rate, blood pressure, level of consciousness, skin coloration and degree of spontaneous activities, especially when employed general anesthesia. In the second phase of the postoperative, occurs the re-adaptation of the patient to the environment identified by attitudes like sit, stand up, walk around.\(^19\)\(^,\)\(^22\)

Nursing's mission is to readjust the patient analyzing their disabilities and the environment in which it is inserted, requiring to be attentive to the particularities of each individual.

In the context of a cataract of ambulatory surgery, the patient receives discharge 30 minutes or less after the intervention. The guidance provided to them need to be verbal and in writing, explaining how to protect the eye, to administer medications, to recognize...
the signs and complications and get emergency care. The patient must be informed that after surgery it may exist minimum discomforts and professional should advise them to take an anesthetic agent according to the prescription.1,13

Other expendable guidelines for treatment, and that the nurse should emphasize, consist of informing the patients that they can only lower the head normally when it is authorized by the doctor; he must wait a minimum of ten days to do gymnastics and fifteen days to water aerobics; sexual activity should be avoided for a period of seven days, avoiding efforts and that eyes stay down, so as not to cause blood pressure; any other activity that requires physical effort also needs to be avoided; reading is only recommended after five days; it is necessary to restrict themselves to environments that have too much dust, sparks and trash; is strictly prohibited scratch or squeeze the eye surgery; It is not recommended to swim in river, pool and sea to avoid trauma, in addition to these environments can be a source of infection; and after 24 hours of surgery, the patient should make use of an eye piece cap followed by use of sunglasses during the day and a metallic eye shield at night, over a period of four weeks, since the eye is sensitive to light.1,11

This range of information is indispensable for the good result of the treatment, thus allowing a cure for cataracts. These guidelines will give subsidy to patients and responsible care activities continued, enabling greater security in their recovery, and provide greater autonomy and demystifying myths and taboos about post-surgery.

Professional nursing as health-promoting agent must also seek the reduction of the numbers of cases of blind people caused by cataracts. The actions of nursing must initialize in the basic attention by identifying cases, prevention of disease and the prior routing for curative surgery, preventing the growth of the problem. In Brazil, the Health Ministry implemented the projects of joint effort of cataract for which provided a “extra-light” to subsidize the services, thus raising the quantity of surgeries performed.3,9,24 This project seeks to eliminate logistical barriers to the individual visually impaired by cataracts receives the necessary treatment by facilitating access to eye examination and surgery, as well as through the educational process of the population.25 These projects had great importance to psychological, educational, and breaking down barriers of access, especially economical.

Based on the experience of joint efforts, the concept of surgical treatment of cataracts solidified and Brazil became one of the leaders in prevention of blindness in the world.26 The WHO recommends a rate of at least 3,000 surgeries per million inhabitants to seek the end of blindness by the year 2020.7 Let’s fight!

**CONCLUSION**

The objectives of the study were achieved by being able to systematize the nursing actions for the control and treatment of cataracts based on integrative review. It was discussed the importance of nurses and technical staff in all spheres for the control and treatment of cataracts, since health promotion, in the prevention of disease by detecting the problem early until phases of preoperative, postoperative, and trans-operative with targeted care standards guidelines, seeking to meet the biological needs and psycho-emotional, aiming at a better recovery of the patient.

It was noticed that cataract surgery is one of the most performed surgical procedures, including in the State of Bahia/BA/northeastern Brazil, however, the cataract is still the leading cause of blindness in the world. Therefore, it is necessary to facilitate the access of the population to cataract surgery and continue to stimulate the assistance decentralized models and community campaigns of prevention of blindness, allowing the patient to have their treatment promptly with minimum expense and maximum security and efficiency.

Production on this theme, especially by nursing should be encouraged and expanded to the consolidation of this knowledge.

It is proposed to continue the study with the elaboration of specific instrument and directed to the patient submitted to cataract surgery in pre-surgery period as well as the elaboration and implementation of nursing diagnoses and their respective requirements. It is suggested the involvement and with the multidisciplinary team in order to offer...
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