

HOSPITAL DISCHARGE GUIDELINES FOR SELF-CARE PERFORMANCE AFTER CARDIAC SURGERY: INTEGRATIVE REVIEW

ORIENTAÇÕES DE ALTA HOSPITALAR PARA O DESEMPENHO DO AUTOCUIDADO APÓS A CIRURGIA CARDÍACA: REVISÃO INTEGRATIVA

ORIENTACIONES DE ALTA HOSPITALARIA PARA EL RENDIMIENTO DEL AUTOCUIDADO DESPUÉS DE LA CIRUGÍA CARDÍACA: REVISIÓN INTEGRATIVA

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Objective: to identify the necessary health guidelines, so that the patient in the postoperative period of cardiac surgery can perform self-care behaviors after hospital discharge. **Method:** integrative review, following the steps proposed by Whittemore, limited to the Portuguese, English and Spanish languages, and publication between 2007 and 2018. The databases used were available on the virtual libraries PubMed and Virtual Health Library and the Ursi instrument for data extraction. The articles were classified according to the level of evidence. **Results:** six articles were included. The findings allowed creating nine categories that group the health guidelines for self-care performance after hospital discharge from cardiac surgery. **Conclusion:** activities of daily living, diet, physical activity and exercise, psychological symptoms, control of risk factors, complications, drug therapy, management of symptoms and skin were health guidelines identified for the performance of self-care after hospital discharge of patients undergoing cardiac surgery.

Descriptors: Myocardial Revascularization. Cardiovascular Surgical Procedures. Heart valves. Post-Operative Care. Patient Education as Topic. Self Care.

Objetivo: identificar as orientações de saúde necessárias, para que o paciente em pós-operatório de cirurgia cardíaca possa desempenhar comportamentos de autocuidado após a alta hospitalar. *Método:* revisão integrativa, seguindo as etapas propostas por Whittemore, limitada aos idiomas português, inglês e espanhol, e publicação entre 2007 e 2018. *Utilizaram-se as bases de dados disponíveis nas bibliotecas virtuais PubMed e Biblioteca Virtual em Saúde e o instrumento de Ursi para extração dos dados. Classificaram-se os artigos conforme o nível de evidência. Resultados:* foram incluídos seis artigos. *Os achados possibilitaram a criação de nove categorias que agrupam as orientações de saúde para o desempenho do autocuidado após alta hospitalar decorrente de cirurgia cardíaca. Conclusão:*

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atividades de vida diária, alimentação, atividade e exercício físico, sintomas psicológicos, controle de fatores de risco, complicações, terapia medicamentosa, manejo dos sintomas e pele foram orientações de saúde identificadas para o desempenho do autocuidado após alta hospitalar de pacientes submetidos a cirurgia cardíaca.

Descritores: Revascularização Miocárdica. Procedimentos Cirúrgicos Cardiovasculares. Valvas Cardíacas. Cuidados Pós-Operatórios. Educação de Pacientes como Assunto. Autocuidado.

Objetivo: identificar las orientaciones de salud necesarias, para que el paciente en el período postoperatorio de la cirugía cardíaca pueda realizar comportamientos de cuidado personal después del alta hospitalaria. Método: revisión integradora, siguiendo los pasos propuestos por Whittemore, limitada a los idiomas portugués, inglés y español, y publicación entre 2007 y 2018. Fueron utilizadas las bases de datos disponibles en las bibliotecas virtuales PubMed y Biblioteca Virtual en Salud y el instrumento Ursi para la extracción de datos. Los artículos fueron clasificados de acuerdo con el nivel de evidencia. Resultados: se incluyeron seis artículos. Los hallazgos permitieron la creación de nueve categorías que agrupan las orientaciones de salud para el desempeño del autocuidado después del alta hospitalaria debido a la cirugía cardíaca. Conclusión: las actividades de la vida diaria, la dieta, la actividad y el ejercicio físico, los síntomas psicológicos, el control de los factores de riesgo, las complicaciones, la terapia farmacológica, el manejo de los síntomas y la piel fueron orientaciones de salud identificadas para el desempeño del autocuidado después del alta hospitalaria de los pacientes sometidos a cirugía cardíaca.

Descriptor: Revascularización Miocárdica. Procedimientos Quirúrgicos Cardiovasculares. Válvulas Cardíacas. Cuidados Postoperatorios. Educación del Paciente como Asunto. Autocuidado.

Introduction

Cardiovascular diseases (CVD) account for 31% of all deaths globally, constituting the main cause of death in developing countries⁽¹⁾. In the national scenario, they occupy a prominent role, accounting for 27.7% of deaths⁽²⁾. Cardiovascular Surgeries (CVS) are part of the treatments regulated in guidelines and consensus for CVD, the most common being Myocardial Revascularization Surgery (MRS) and the correction of valve diseases⁽³⁾.

Due to the high degree of complexity, cardiovascular surgeries present high rates of hospital readmission⁽⁴⁾. The most prevalent postoperative complications, such as cardiac, neurological and infectious complications, may be part of the postoperative period⁽⁵⁾. Thus, the transition of patient care becomes an essential practice, which requires health planning and education to ensure health care at home⁽⁶⁻⁷⁾.

There is also a lack of systematics in the planning of education for hospital discharge, low quality of the guidelines provided and reports of patients with doubts about the types of care and how to perform them⁽⁸⁾. The lack of organization of preparation for discharge affects the quality of life of patients and their caregivers, as it is a critical moment of transition

and adaptation of their activities of daily living⁽⁹⁻¹⁰⁾, imposed by the surgical procedure and future clinical treatment of prevention of cardiovascular events.

In this context, the nurse, as a member of the health team, acts in the coordination and execution of care in the transition from the hospital to the home. He/she provides effective guidance, which favors the use of medications and self-care management, increasing adherence to treatment and reducing the rate of hospital readmission⁽⁶⁾.

The transition process can be facilitated or hindered by personal circumstances, environmental and social conditions⁽¹¹⁾, by age, clinical complexity of the patient, cognition, literacy and the presence of jargon in the instructions⁽¹²⁻¹³⁾. The educational planning for the transition of care should include the assessment of the learning needs of patients and their families⁽¹¹⁾, identifying their limitations and doubts about how to control pain, nausea, constipation and emotional problems, which, among many others, can permeate the postoperative phase. Individualized patient-centered care can help increase confidence, strengthening the patient and promoting self-care⁽⁴⁾.

Thus, self-care is defined as a process of choice based on personal and social experiences, carried out by the individual, in order to achieve a stability or improvement of signs and symptoms before an illness condition. Some factors, such as health literacy, psychosocial status, cognition, education level and disease level, may be associated with non-adherence to self-care⁽¹⁴⁾. The individual's empowerment over his/her health condition is of paramount importance to obtain autonomy, being the most appropriate way to make relevant decisions, resulting in the maintenance of quality of life and prevention of recurrent hospitalizations⁽¹⁵⁾.

Effective strategies for patients to be able to self-manage signs and symptoms in the postoperative period are essential for recovery⁽¹⁶⁾. These, in turn, should have an emancipatory character and consider the patient holistically, integrating his/her community and family, so that there is an exchange of experiences and not only the imposition of information on health-disease conditions⁽¹⁷⁾.

Nurses empowered through scientific evidence that support their clinical practice are a professional capable of developing these educational strategies in health effectively, in order to motivate the individual's self-care⁽¹⁸⁻¹⁹⁾.

However, the care guidelines for patients undergoing MRS⁽²⁰⁾, correction of valve diseases⁽²¹⁾ and who present Unstable Angina (UA) and Acute Myocardial Infarction (AMI)⁽²²⁾, do not comprehensively bring the contents necessary for teaching the patient for self-care performance after hospital discharge.

In this context, understanding the role of nurses in the care transition, the present study aims to perform an integrative review to identify the necessary health guidelines, so that the patient in the postoperative period of cardiac surgery can perform self-care behaviors after hospital discharge.

Method

An integrative review study was conducted on the health guidelines necessary for self-care

performance after hospital discharge of patients undergoing cardiac surgery. For the present review, the following steps were used: problem identification, bibliographic research, data evaluation, data analysis and literature review presentation⁽²³⁾.

The research question was defined based on the PICO strategy, in which P (patient) are the adult patients in the postoperative period of cardiac surgery of revascularization, valve and combined surgery; I (intervention) represents primary studies that address the necessary guidelines for the patient or education/teaching for the performance of care after hospital discharge; and O (outcome) is the self-care/learning measures of the patient. In this integrative review, the C (control), the third element, was not used. The guiding question of the study was: What health guidelines do patients in the postoperative period of cardiac surgery need to receive in order to perform self-care after their hospital discharge?

To search the articles, the databases available on PubMed and Virtual Health Library (VHL) were used. The search strategy was based on the Health Sciences Descriptors of Bireme (DeCS) and Medical Subject Headings (MeSH), in addition to the Boolean operators AND and OR with the terms: myocardial revascularization, cardiovascular surgical procedures, heart valves, postoperative care, education of patients as topic, and self-care.

The search was limited to the Portuguese, English and Spanish languages, available in full, and published from 2007 to 2018. The results of this review were compared with the guidelines⁽²⁰⁻²²⁾ for management of coronary and valve patients. Because of this, the time frame from 2007 was defined according to the date of publication of these standards, because studies prior to this date could address conflicting guidelines. The search for articles occurred through online access to the databases, in the months from January to March 2019.

To meet the inclusion criteria, the articles should respond to the elements defined in the PICO strategy, be fully available and within the

time frame. Articles of all types of review were considered exclusion criteria. To select studies, the titles and abstracts was initially read.

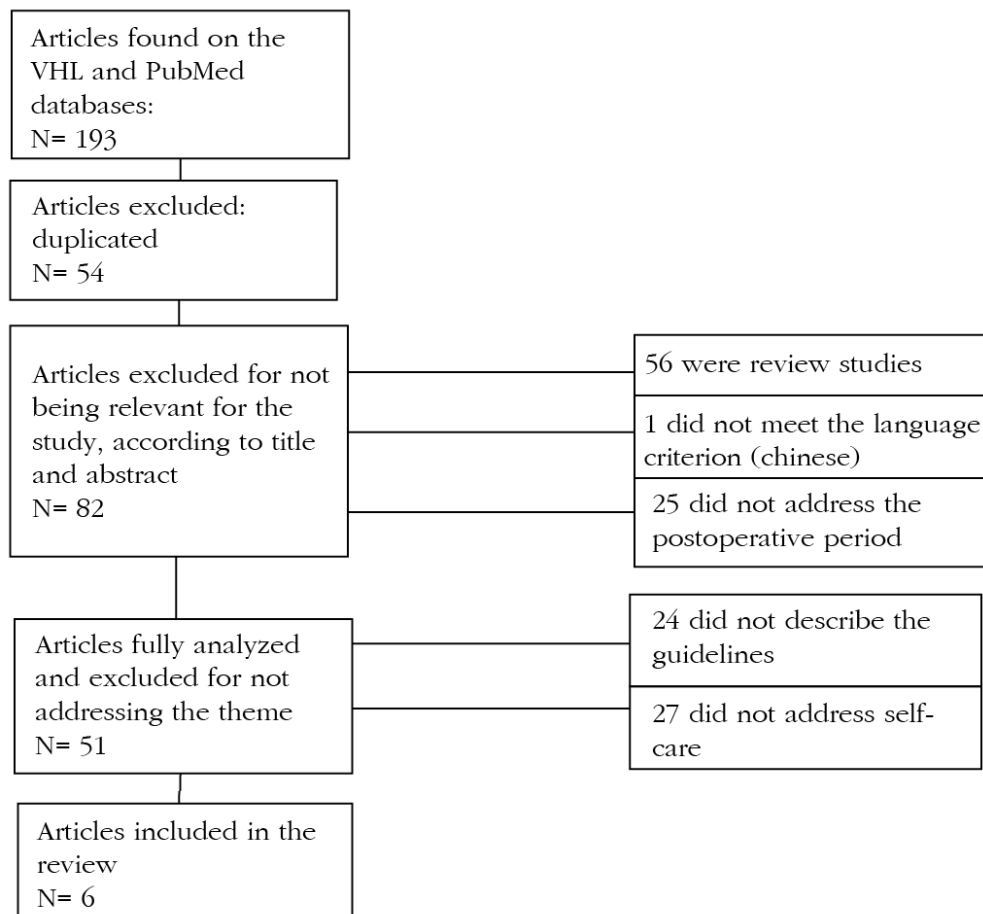
The data extraction of the studies included in the review was performed by two reviewers, independently, through the application of an instrument that allowed organizing the findings, facilitating the comparison of studies and data visualization⁽²⁴⁾. Subsequently, the guidelines were listed, based on the guiding question of the study, and categorized into care lines.

The articles were classified according to the level of evidence, as the following classification: (I) systematic reviews or meta-analyses of relevant clinical trials; (II) randomized clinical trial; (III)

clinical trial without randomization; (IV) cohort and case-control studies; (V) systematic review of descriptive and qualitative studies; (VI) a single descriptive or qualitative study; (VII) opinion of a committee of experts⁽²⁵⁾.

The database search strategies returned 193 studies whose titles and abstracts were independently analyzed. Of these, 54 were duplicated, 56 were review studies, 1 did not meet the language criterion (Chinese) and 25 did not address the postoperative period. Altogether, 57 studies were fully read, excluding 51, because 24 did not describe the guidelines performed and 27 did not address self-care. Thus, 6 articles (Flowchart 1) were included in the review.

Flowchart 1 – Process of selection of primary studies



Source: Created by the authors.

The synthesis of the findings is presented as a chart. The analysis occurred based on the established categories, as follows.

Results

The final sample consisted of six articles, fully read by pairs. Regarding the databases, five studies were located in both PubMed and VHL, all indexed in Medline. One study

was found in the VHL, indexed in Lilacs. Five articles are in English and one in Portuguese. Observing the evidence power obtained in the articles, three (50%) articles had level II of evidence and two (16.66%) level III and VI, each. A study was not classified because it did not fit the methodological framework adopted in this study. Chart 1 shows the synthesis of the studies identified in the review.

Chart 1 – Characterization of studies in the databases consulted, according to authors, title, year of publication, type of study and classification according to level of evidence

Authors	Titles	Year	Type of study	Level of evidence
Yildiz T, Gürkan S, Gür Ö, Ünsal C, Gökteş SB, Özen Y ⁽²⁶⁾	Effect of standard versus patient-targeted in-patient education on patients' anxiety about self-care after discharge from cardiovascular surgery clinics	2014	Prospective cohort	II
Fredericks S ⁽²⁷⁾	The influence of country of origin on engagement in self-care behaviours following heart surgery: a descriptive correlational study	2012	Descriptive non-experimental	VI
Fredericks S ⁽²⁸⁾	Timing for delivering individualized patient education intervention to Coronary Artery Bypass Graft patients: An RCT	2009	Randomized clinical trial	II
Cebeci F, Çelik SS ⁽²⁹⁾	Discharge training and counselling increase self-care ability and reduce post discharge problems in CABG patients	2008	Prospective and quasi-experimental study	III
Fredericks S, Sidani S, Shugurensky D ⁽³⁰⁾	The effect of anxiety on learning outcomes post-CABG	2008	Randomized clinical trial	II
Gentil LLS, Silva RM, Benavente SBT, Costa ALS ⁽³¹⁾	Educational manual for the care of patients in the post-operative period of myocardial revascularization: a tool for patients and families	2017	Methodological research	-

Source: Created by the authors.

Table 1 presents the health guidelines offered to patients in the postoperative period of cardiac surgery, identified in the studies, for the

performance of self-care after hospital discharge, according to the classification by categories, exposed by the number of their reference.

Table 1 – Guidelines for self-care after hospital discharge of patients in the postoperative period of cardiac surgery, by number of studies and Reference. São Paulo, SP, Brazil – Jan-Mar 2019. (N=6) (continued)

Self-care guidelines	Number of studies % (n)	Reference
Activities of Daily Living		
Changes in sleep and rest pattern	66.6 (4)	27-28,30-31
Body hygiene (showering, dressing)	33.3 (2)	26,31
Sexual activity	33.3 (2)	26,29
Social activities (attending public places)	16.6 (1)	31
Eating		
Constipation	83.3 (5)	26-28,30-31
Special diet	66.6 (4)	26-27,29,31
Restriction of liquids	66.6 (4)	27-28,30-31
Salt intake	33.3 (2)	28,30
Physical activity and exercise		
Physical exercise	66.6 (4)	26,29-31
Usual activities (jogging, early walking climbing stairs, driving)	66.6 (4)	27-28,30-31
Deep breathing and coughing exercises	33.3 (2)	29,31
Psychological symptoms		
Emotional reactions (sadness, feeling vulnerable, fear, worry and mood swings)	83.3 (5)	26-29,31
Anxiety	33.3 (2)	28,31
Depression	16.6 (1)	31
Control of risk factors		
Outpatient follow-up consultations	66.6 (4)	26,28,30-31
Tobacco	33.3 (2)	26,31
Alcohol	33.3 (2)	26,31
Prevention of cardiovascular risk factors	33.3 (2)	29,31
Use of illicit drugs	16.6 (1)	26
Complications		
Tiredness/fatigue/dyspnea	66.6 (4)	27-28,30-31
Edema in upper limbs (UL) and lower limbs (LL)	49.9 (3)	27-28,30
Emergencies/When to go to the hospital	49.9 (3)	26,29,31
Arrhythmias	33.3 (3)	28,30-31
Altered blood pressure and heart rate	33.3 (2)	29,31
Hyperthermia and fever	16.6 (1)	29
Drug therapy		
Medication administration	83.3 (5)	27-31
Prevention of adverse effects	33.3 (2)	26,31
Purchase of medicines	16.6 (1)	31
Drug interaction	16.6 (1)	31
Management of symptoms		
Pain (chest, abdominal, lumbar)	83.3 (5)	26-28,30-31
Nausea	49.9 (3)	27-28,30
Vomiting	49.9 (3)	27-28,30
Dizziness	33.3 (2)	28,30

Table 1 – Guidelines for self-care after hospital discharge of patients in the postoperative period of cardiac surgery, by number of studies and Reference. São Paulo, SP, Brazil – Jan-Mar 2019. (N=6) (conclusion)

Self-care guidelines	Number of studies % (n)	Reference
Skin		
Care of surgical incisions	66.6 (4)	26,29-31
Complications of the surgical wound	66.6 (4)	27-28,30-31
Pain in the incisions	33.3 (2)	28,30
Surgical wound healing	33.3 (1)	31

Source: Created by the authors.

There were no studies published in the past ten years addressing guidelines for the postoperative period of valve correction surgeries.

In relation to the context in which the guidelines for self-care performance were carried out in the studies, it was observed: the themes were addressed during the application of educational actions with patients^(26-27,29,30), or served as the basis for building learning tools for the education of patients in the postoperative period of MRS⁽²⁸⁾, or were used to compose instruments for assessing self-care behaviors⁽³¹⁾.

The teaching of the guidelines for self-care performance after hospital discharge was performed through strategies, such as telephone call⁽²⁶⁻²⁷⁾, video⁽²⁶⁾ and educational handbook⁽²⁹⁻³⁰⁾, most of which were performed in the postoperative phase. Five studies⁽²⁶⁻³⁰⁾ conducted a previous assessment of the individual learning needs of patients in relation to self-care activities. Two studies⁽²⁶⁻²⁷⁾ showed higher performance of self-care behaviors after educational interventions and one⁽³⁰⁾ reported a positive impact on patients' self-care capacity and relief of problems found in the postoperative period.

One study⁽²⁹⁾ showed that individualized education decreases anxiety levels about self-care after discharge, and another⁽³¹⁾ evidenced that the country of origin influences the number of self-care behaviors that individuals perform after cardiac surgery.

One study revealed that the moment of the educational intervention before or after discharge does not influence the performance of self-care⁽²⁶⁾. One study reported that anxiety

levels have a negative potential in knowledge retention, self-care and experience of symptoms during the postoperative period⁽²⁷⁾.

Discussion

Hospital discharge is a care step organized in advance. The education process involves patients and family members, sharing information effectively, with different communication resources, and making sure that doubts and problems be clarified and solved^(18,32).

Considering that, in the present literature review, none of the studies that comprised the sample has level I and only half have level II of evidence, there is the need for researches to produce results with strong levels of scientific evidence, in order to support the teaching of the patient for the performance of self-care after hospital discharge.

Although none of the 38 guidance topics reached 100% agreement between the articles, all addressed at least one topic within each category. The most cited health guidelines for patients in the postoperative period of cardiac surgery (5-83.3%) were medication administration⁽²⁷⁻³¹⁾, emotional reactions^(26-29,31), constipation^(26-28,30-31) and pain^(26-28,30-31).

In fact, the administration of medications is one of the guidelines most provided by nurses during hospitalization and hospital discharge. Nevertheless, non-adherence to medication in patients with chronic conditions is significant, ranging from 50% to 80%. Thus, in the guidelines on medications, in addition to reinforcing

the importance of treatment adherence, there is need to consider the particularity of medication, preventing interactions between drugs. Furthermore, there is need to identify the difficulties of each patient, such as financial condition and difficulty identifying medications, factors that directly affect medication adherence^(6,33-34). Despite these data, only one article cited the guidelines on drug acquisition and interaction.

Anxiety and depression levels increase in the postoperative period of cardiac surgery. There are reports of fear and uncertainty regarding the future. Emotional reactions also begin preoperatively, increasing the use of analgesics, the risks of post-surgical morbidity and length of hospital stay. Therefore, psychological symptoms should be routinely evaluated even before surgery, and be part of the hospital discharge planning, to minimize the impact they can bring after the procedure⁽³⁵⁾.

One of the most prevalent nursing diagnoses in the postoperative period is the risk of constipation. This occurs because the postoperative period is marked by changes in the patient's routine, which affect the eating and limitation of physical activities, resulting in decreased gastrointestinal motility. Thus, it is a theme that should be part of the guidelines for the transition of care at home⁽³⁶⁾.

Pain is a prevalent symptom and considered one of the main stressors perceived by patients in the postoperative period of cardiac surgery. It is associated with worse functional independence and delayed surgical recovery. Its adequate management can contribute to reducing the length of hospital stay and complication rates in the postoperative period⁽³⁷⁻⁴⁰⁾.

Also frequent in the articles – 4 cases, corresponding to 66.7 % – were the guidelines on care for surgical incisions, postoperative complications (symptoms of tiredness, fatigue and dyspnea)^(27-28,30-31), outpatient follow-up consultations^(26,28,30-31), return to usual activities^(27-28,30-31), physical exercise^(26,28,30-31), restricted liquids^(27-28,30-31), special diet^(26-27,29,31) and changes in sleep and rest pattern^(27-28,30-31).

The main care guidelines for patients with coronary artery disease and valvulopathies address several guidelines identified in this study. These orientations refer to sexual activity, diet, smoking, drug therapy, emotional reactions, depression, prevention of cardiovascular risk factors, habitual activities, physical exercise and surgical wound care⁽²⁰⁻²²⁾.

Although the guidelines address topics for guidance and transition for home care, they do not cover important topics to empower patients to adopt self-care behaviors in the postoperative period of cardiac surgery.

Only one article (18.4%) addressed the guidelines regarding social activities (attending public places)⁽³¹⁾, depression⁽³¹⁾, illicit drug use⁽²⁶⁾, hyperthermia and fever⁽²⁹⁾, acquisition and interaction of medications⁽³¹⁾. Nonetheless, a study⁽⁴¹⁾ states that the physical, psychological, interpersonal and social aspects of health are inseparable, and the nursing is responsible for helping the patient understand them.

The need for changes in lifestyle after cardiac surgery can lead the patient to avoid or refuse participation in social events, causing social isolation, especially in males⁽⁴²⁾. As social isolation and loneliness affect the increase in mortality rates, due to the effects on mental health and cardiovascular diseases⁽⁴³⁾, these themes should be part of the guidelines for the care transition.

Among the risk factors for acute cardiac events, the use of illicit drugs is well established. The greatest concern about the use of illicit drugs after surgery is associated with high long-term mortality and the number of valve reinfections. Because of this, it is recommended to participate in rehabilitation programs after hospital discharge⁽⁴⁴⁻⁴⁵⁾. Few studies address the use of illicit drugs in the postoperative period of cardiac surgeries. Moreover, the guidelines also did not include this approach.

The guidelines regarding hyperthermia and fever are justified due to infectious complications, common in the postoperative period of cardiac surgeries. Hospital infections, especially of the surgical site, prolong the hospitalization period, generate readmission and increase treatment

costs⁽⁴⁶⁻⁴⁷⁾. Teaching patients and their families to identify the most common signs and symptoms of postoperative complications allows early diagnosis and intervention and, therefore, should compose the guidelines for hospital discharge.

The guidelines argue that the process of hospital discharge should be individualized and the active participation of patients in decision-making processes should be encouraged, so that they understand the modifiable factors, understand the importance of treatment adherence and their involvement in the cardiac rehabilitation process. These guidelines should be offered by health professionals clearly, with an objective language to clarify doubts and uncertainties, leaving patients aware of their role in improving quality of life and thus effectively visualizing the long-awaited clinical improvement⁽²⁰⁻²²⁾.

A limitation of this study includes the lack of current studies on the specific guidelines for the postoperative period of valve correction surgeries. Other limitations are the date of publication of the most recent Brazilian guidelines, as well as the scarcity of chapters that address the necessary scope of themes to compose guidelines for self-care after the hospital discharge of this group of patients.

Conclusion

The health guidelines identified for self-care performance after hospital discharge, in the postoperative period of cardiac surgery, involve: activities of daily living, diet, physical activity and exercise, psychological symptoms, control of risk factors, complications, drug therapy, symptom management and skin care.

Most of these guidelines were mentioned in at least two articles of the review. Among the most cited are medication administration, emotional reactions, constipation and pain. Social activities, depression, illicit drug use, hyperthermia, fever, acquisition and interaction of medications were poorly mentioned guidelines, despite their importance for rehabilitation, the impact

of mortality, the early identification of signs of complications and medication adherence.

The survey of the main themes for effective guidance facilitates the creation and implementation of educational technologies capable of empowering patients in the postoperative period of cardiac surgery to incorporate actions for self-care.

Collaborations:

1 – conception, design, analysis and interpretation of data: Thaina Laurentino Santos, Manoela Gomes Grossi Laprano and Ana Paula da Conceição;

2 – writing of the article and relevant critical review of the intellectual content: Thaina Laurentino Santos and Manoela Gomes Grossi Laprano;

3 – final approval of the version to be published: Manoela Gomes Grossi Laprano and Ana Paula da Conceição.

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