

EDUCATIONAL SETTINGS IN THE MANAGEMENT OF PATIENTS WITH HEART FAILURE

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Congestive heart failure (CHF) presents, besides the magnitude of epidemiological data, relevant characteristics, including frequent hospitalizations caused by severe signs and symptoms, which should be studied to reduce the negative impact of the disease on the public health system. With the advent of several clinical trials in the area of CHF, the treatment has become more complex, with the need of a more organized structure to assist these patients. Education is considered essential to reduce morbidity and mortality. The setting, to begin or to continue the educational process, can be a hospital (hospitalization), outpatient clinic, home, a day-hospital or yet, a combination of these. The main researches in this area recognize and motivate an investigation of other paths to get better results in the pharmacological and non-pharmacological treatments. In this study we review recent data, approaching several educational settings in the management of patients with CHF.

DESCRIPTORS: heart failure, congestive; nursing; education, self care

ESCENARIOS DE EDUCACIÓN PARA EL MANEJO DE PACIENTES CON INSUFICIENCIA CARDÍACA

La insuficiencia cardíaca congestiva (ICC) además de la magnitud epidemiológica, presenta características relevantes, entre las que se incluyen hospitalizaciones frecuentes debidas a la exacerbación de signos y síntomas, los cuales deben ser ampliamente abordados para reducir el impacto negativo de la enfermedad en el sistema público de salud. Con la aparición de nuevos ensayos clínicos en el área de ICC, el tratamiento pasó a ser más complejo, surgiendo la necesidad de una estructura más organizada para la atención de los pacientes afectados. En este contexto, la educación es considerada esencial para reducir la morbimortalidad, siendo el escenario ideal para dar continuidad en el proceso educativo, el ambiente hospitalario (internación), el ambiente de ambulatorio, el domiciliar, en la rutina diaria del hospital, o en la combinación de éstos. Investigadores del área reconocen y estimulan a la investigación, de tal modo que sea posible mejorar los resultados en el tratamiento farmacológico y no-farmacológico. En este artículo revisaremos información contemporánea, abordando los diversos escenarios de educación para el manejo del pacientes con ICC.

DESCRIPTORES: insuficiencia cardíaca congestiva; enfermería; educación; autocuidado

CENÁRIOS DE EDUCAÇÃO PARA O MANEJO DE PACIENTES COM INSUFICIÊNCIA CARDÍACA

A insuficiência cardíaca congestiva (ICC) apresenta, além da magnitude dos dados epidemiológicos, características relevantes, incluindo hospitalizações frequentes debidas à exacerbção dos sinais e sintomas, que devem ser mais amplamente abordados para reduzir o impacto negativo da doença sobre o sistema público de saúde. Com o advento dos vários ensaios clínicos na área de ICC, o tratamento da doença passou a ser mais complexo, necessitando de uma estrutura organizada para o atendimento de pacientes por ela acometidos. A educação, nesse contexto, é considerada essencial para reduzir a morbimortalidade. O cenário, para o início ou a continuidade do processo educativo, pode ser hospitalar (internação), ambulatorial, domiciliar, hospital-dia ou, ainda, ser uma combinação desses ambientes. Os principais pesquisadores nessa área reconhecem e estimulam a investigação de outros caminhos, que melhorem os resultados no tratamento farmacológico e não-farmacológico. Neste artigo, revisaremos dados contemporâneos, abordando os diversos cenários da educação para o manejo de pacientes com ICC.

DESCRIPTORES: insuficiência cardíaca congestiva; enfermagem; educação; autocuidado

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INTRODUCTION

Heart failure (HF) is a chronic and progressive clinical syndrome that imposes an important functional limitation, affecting the quality of life. It frequently occurs in patients with other diseases⁽¹⁾. HF is considered a public health problem worldwide. In the last three decades, both HF incidence and prevalence have increased. With the extended life expectancy, estimates suggest that in 2025 Brazil will have the sixth highest population of elderly people and that HF will be the first cause of death due to cardiovascular disease in the world⁽²⁾.

Frequent hospitalizations provoked by the aggravation of HF signs and symptoms constitute a challenge to the management of patients. Literature data show high readmission rates in the first six months after discharge from the hospital, with the first 30-90 days being considered the most critical period, with readmission rates ranging from 29% to 47%, which increases costs of the health system⁽¹⁾. Based on this scenario, innumerable studies have been developed, investigating causes and factors that seem to be similar in several countries⁽³⁾.

In a prospective study with 101 patients, deficient adherence to pharmacological and non-pharmacological treatment was identified as one of the most frequent readmission factors. Among the readmitted patients (64%), 22% presented deficient adherence to diet, 37% to both diet and drug utilization and 6% non-utilization or irregular utilization of drugs⁽⁴⁾. This was the first study showing the non-adherence as a readmission factor, which was also confirmed later by other researchers^(1, 5-6).

With the advent of various clinical trials in HF area, the treatment of this disease has become more complex and consequently has needed a more organized structure to treat these patients⁽⁵⁾. Besides an optimized pharmacological treatment, mainly with the utilization of drugs that bring attested benefits against mortality (inhibitors of angiotensin-converting enzyme - ACE and beta blockers)⁽⁵⁾, other strategies have been established through randomized clinical trials, with multidisciplinary approaches in the investigation of patients with HF⁽⁷⁻⁸⁾.

The first randomized study addressing this aspect and published in the 1990s included 282 patients. The intervention group (n=142) received

intensive education on HF from the nurse. The main analyzed outcome was survival free from 90-day-readmissions. Although without statistical significance, intervention promoted improved survival from readmission in the active group. In addition, readmissions for any reason, costs and quality of life were significantly improved in the intervention group⁽¹⁾. After this study, multidisciplinary interventions have been broadened into the field of research investigation in patients with HF⁽⁷⁾.

To confirm this result, a recent sub-analysis of CHARM (Candesartan in Heart failure: Assessment of Reduction in Mortality and Morbidity) study demonstrated that, regardless of the adopted pharmacological treatment - association or not of ACE inhibitors with angiotensin receptor antagonists -, the adherence to the approved treatment was what determined, in each group, the best mortality and morbidity outcomes in patients with HF⁽⁹⁾.

We reviewed current data in this article, addressing various educational scenarios of the management of patients with heart failure. For the bibliographical revision, a study was conducted with BIREME and MEDLINE databases between 1988 and 2005, using the following key words: nursing, congestive heart failure, self care and education.

HF SELF CARE EDUCATION STRATEGIES

Health education can be defined as a process that improves the knowledge and abilities influencing the patient's required attitudes to keep an adequate health behavior. HF education, which involves a complex treatment and alterations to the life style, brings an important impact on the quality of life of those with such disease, as well as their relatives, requiring a permanent investigation from the health team⁽¹⁰⁾. The patient's education provided by the nurse follows two directions: an instrumental action, that influences the patient's attitude and behavior; and a protective action, with the purpose of minimizing the patient's apprehension with the treatment. In this process, the provision of information (instruction) is essential, but it does not ensure a change in the behavior by itself. Therefore, education should be directed to 'what the patient needs to do to be healthy', and not only to what he/she should know⁽¹¹⁾. The

scenario to start or continue the educational process may be the hospital (during hospitalization), the outpatient clinic environment, the patient's home, or even the day-hospital, or a combination of them^(3,8,12).

The education process can be described in five steps⁽¹³⁾, as follows: evaluation of previous knowledge, cognition, attitudes, motivation and mistakes the patients make in terms of their health treatment; identification of what should be taught, considering the potential learning barriers; education content planning, with the patient's participation to define individual purposes and select the best interventions to achieve them; planning how the education will be interrupted; and finally, a rigorous evaluation of the educational process that has been implemented.

However, individualizing the education needs is not an easy task. In a descriptive study with 30 patients which evaluated their main educational needs, in the perspective of the patients themselves, doctor and nurse, the group of patients listed the question related to the disease knowledge as being the most important. On the other hand, the doctors listed issues related to what HF is, the syndrome prognosis and pharmacological treatment; and the nurses listed all options mentioned by the patients and included the question "how will I know when I should see a doctor?". The first group attributed lower priority to topics such as diet, exercises and daily weight verification, while doctors and nurses selected us as being of moderate importance⁽¹⁴⁾. Such findings confirm the discussed deficient adherence to non-pharmacological treatment of HF and reinforce the need of the nurse's action in the education of these individuals.

EDUCATION IN HOSPITAL CONTEXT

The studies conducted in hospital context traditionally employ an education plan which is started during the hospitalization and later investigated through outpatient visits, searching for the occurrence of those previously established outcomes. In one of the first studies on health education and support, 179 subjects hospitalized due to HF were randomized, and the intervention group (n=84) received, still during the hospitalization, intensive education by a nurse, besides subsequent investigation with home visits,

seven days after the discharge. The results showed that the education and support provided by the nurse in the transition from hospital to the patient's home significantly improved the self-care patient behavior⁽⁷⁾.

Another study investigated whether the educational intervention provided by a specialist nurse, only during the hospitalization period, would reduce the rates of death of any nature or admissions, within a twelve-month investigation period. The intervention consisted in the education on HF and its treatment (drugs, diet, exercises and early decompensation detection). The obtained results demonstrated reduced mortality and admission rates, when compared to the control group⁽¹⁵⁾.

In another study including 88 patients admitted due to HF, the effect of the educational intervention was evaluated, which started during the hospitalization and was intensified after the discharge, on readmissions and/or mortality and HF hospitalization costs. The patients were allocated to receive the education and support intervention (n=44) or receive the standard health care offered by an assistant doctor (n=44). This purely educational nursing intervention study, without any other management that would involve any medical component, achieved significant results in reducing readmissions, length of stay and generated savings of US\$ 7,515 per patient not hospitalized⁽¹⁶⁾.

The studies mentioned above confirm the idea that strategies involving intensive and comprehensive education in issues on HF treatment are essential in any management program of this syndrome⁽⁵⁾. In accordance with a sequence of various scenarios, from hospital care to the outpatient setting, in which HF can be managed and suitable to assess self-care and education of HF patients, we will next review, some studies conducted in an environment characterized as intermediate assistance, the day-hospital.

EDUCATION IN DAY-HOSPITAL CONTEXT

The day-hospital concept in cardiology and specifically, in HF, is still little explored in both national and international literature. It consists of a form of short-term and intermediate treatment to individuals that need daily medical and nursing supervision, but do not fulfill the hospitalization criteria.

Although the literature still shows few results with patient investigation on day-hospital, an Italian study compared the cost/utility efficacy among subjects randomized for a multidisciplinary program, developed at a day-hospital under the supervision of a HF clinic (n=112) or for a standard care (n=122) in the community. The health education and recommendations were provided by four nurses and other team members. At the end of a twelve-month investigation, the control group presented more readmissions and death from cardiac cause when compared to the day-hospital concept, and the day-hospital model was more cost effective⁽³⁾.

In the current HF context, the day-hospital option demonstrates the significant impact on outcomes such as readmissions, death and costs. It is still not clearly described and established in this scenario the role of directed education to patients and their relatives/care providers. On the other hand, the literature provides abundant publication of articles that demonstrate the non-pharmacological therapy benefits based on the education and support to individuals with HF, at the discharge from the hospital, i.e., at the transition between the hospital and extra-hospital environments⁽¹⁶⁾.

EDUCATION IN EXTRA-HOSPITAL CONTEXT

Outpatient Clinic Monitoring

In the outpatient clinic environment, the education process starts with the determination of the knowledge profile on the heart failure issues by the patients and the practiced self-care - basic requirements for the care treatment. In a recent study conducted by our group, we found results similar to those in the literature regarding patients' limited knowledge of the disease and of the self-care, which are aspects directly involved in hospitalizations⁽¹⁷⁾.

It should be noted that the outpatient clinic scenario is appropriate for an intensive education program, both to individuals that have not yet been admitted to a hospital due to HF and those who are returning from hospitalizations due to clinical decompensation. The improved knowledge of the patient on self-care is the key for a successful reduction in morbidity and HF costs^(7,18). The nursing interventions provided individually should constantly reinforce the care considered as essential in non-pharmacological management of HF⁽¹⁷⁾. However, the

effectiveness of the intervention will only be achieved when patients with HF assimilate the main causes of the clinical instability, i.e., understanding that the prevention or the early detection of a hypovolemic status, which provokes increased body weight, edema formation, dyspnea and orthopnea appearance, can avoid decompensation crises, and consequently, visits to emergency or hospital admissions⁽¹⁸⁾.

Other strategies, such as home visits and telephone monitoring, focused on the extra-hospital education, have also shown satisfactory results in the management of patients with HF^(6,12).

Home Visits

Home visits are an instrument that facilitates the approach of patients and relatives. Through this resource, we can better understand the family dynamics and verify the family's level of involvement in the treatment offered⁽¹⁹⁾. Community programs that provide primary care to people with HF at their own home are offered to those that have conditions to go to a specialized clinic⁽⁵⁾. In this context of home management, an investigation was conducted on the home intervention effect on readmissions and death of high-risk patients recently discharged from acute hospital treatment. The patients were either randomized to the control group, which received standard care (n=48), or to the group that received home care (n=49) in the first week after discharge. After a six-month investigation period, it was observed a reduction in unplanned readmissions and extra-hospital death in subjects from the intervention group⁽¹²⁾.

Thus, home visit has shown to be an innovation in health services, an important step for the development of an effective primary prevention policy. This type of care provides an intense education to care providers and/or relatives, making them able and confident to deliver the care⁽¹⁹⁾. Another resource that is available for extra-hospital investigation of people with HF is the telephone monitoring, which is presented below.

Telephone Monitoring

Monitoring by telephone can be considered an adjunct method in the investigation of people with HF, if used to reinforce a plan of care and an educational process, already described in some of the scenarios. It is a method usually used in the investigation of patients after hospital discharge, and in interventions performed through home visits.

Considering the effectiveness already attested of other strategies and attempting to

investigate new ways of improving the HF management results, a randomized study was developed to evaluate the effectiveness of a standardized telephone intervention, concentrated on reducing the utilization of health resources. Patients recently discharged from hospital (n=130) were allocated to the intervention group and the investigation was performed through standardized telephone calls, according to a computer program. The subjects in the control group (n=228) received the usual care of instruction before discharge and investigation with their respective assistant doctors. The intervention group presented a significant reduction of HF readmission rates when compared to the control group, in the first three months and at the end of six months. The authors point out that the telephone monitoring and all forms of HF management emphasize the correct and systematic utilization of all prescribed drugs and solve any questions about adverse effects that are incorrectly related to the pharmacological treatment⁽⁶⁾. Likewise, an American study, which included several home visits besides the telephone contact, presented similar results⁽¹⁵⁾.

Researchers from Argentina published a randomized clinical trial with 1,518 subjects whose purpose was to determine whether a telephone station of interventions conducted by nurses would reduce the incidence of death of any nature or admission caused by HF aggravation. The intervention proposal included improved adherence to the diet and drug treatment, monitoring of symptoms, mainly dyspnea and fatigue, control of water overload signs through the weight and edema verification, and practice of physical activity. The results did not demonstrate any impact on mortality, but presented a significant reduction on readmissions due to HF (Relative Risk Reduction = 29%, P=0.005)⁽²⁰⁾. Summarizing, the telephone monitoring performed alone is still insufficiently studied. However, the telephone monitoring as a non-pharmacological therapy component reinforces the intervention intensity and provides means to more efficient and prompt control in critical situations and HF aggravation.

FUTURE PERSPECTIVES

In 2005, the first systematic revision was published to determine the impact of hospital

multidisciplinary interventions on the main outcomes. Results show a significant reduction in mortality, with rates similar to those obtained with ACE utilization. The risk of admission of any nature was reduced by 13%; the mortality reduced around 20%; readmissions caused by HF were reduced to 30%; and, in ten trials that describe the mean hospitalization period (days), a reduction of 1.9 days was observed in the intervention group. The study showed the impact of the multidisciplinary management on the main negative outcomes of HF and emphasizes the benefit, mainly due to the home care strategy, in reducing readmissions of any nature, of the telephone monitoring and the telephone investigation on mortality, in addition to a similar benefit of home care and telephone interventions relative to admissions⁽²¹⁾.

The literature has already demonstrated the benefits regarding the health education and support interventions obtained by multidisciplinary teams in several environments where HF can be managed⁽²²⁾. However, some questions have not yet been clearly answered, as several studies have found negative or inconclusive results relative to the outcomes provided by educational interventions⁽⁷⁾. For instance, what would be the most effective education program and what should be the education intensity level in the investigation of patients with HF?

This uncertain scenario encouraged a multi-center study, named COACH (Coordinating study evaluating Outcomes of Advising and Counseling in Heart failure), which will evaluate 1,050 subjects randomized into 3 groups: a) visits to a cardiologist; b) basic and support education; and c) intensive and support education. The results of this study may help the health team to select what intervention should be added or removed from the HF management and control programs⁽²²⁾.

FINAL CONSIDERATIONS

The complexity in managing individuals with HF is a challenge for the health team involved. In this sense, the nurse action as integral part of the multidisciplinary teams specialized in the HF management is essential. Future prospective studies could explore alternative actions, such as group instruction, which is an example of what has been done in other contexts, such as the diabetic patient management.

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