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Factors related to clinical and educational management of patients in the pre and post-heart transplant period: an integrative review

ABSTRACT | Objective: To analyze the recommendations for therapeutic and educational approaches in patient care in the pre- and post-heart transplant period. Methods: This is an integrative review based on the PICO strategy, carried out with 12 articles generated through research in the LILACS databases; MEDLINE; BDNF; IBECs; BINACIS and COLECCIONASUS in August 2019. Results: The work of a multidisciplinary team specialized in transplantation and health education is recommended. A higher level of education, a better cognitive condition and high levels of social satisfaction are predictive of an increase in the years of post-transplant survival. The main aspects to be worked on are: heart failure action and its impact on the organism, available treatments, recovery period, exam routines and follow-up. Conclusion: In view of the complexity of the theme, a specialized assistance team and reflection on the inclusion of cardiopath and family members in the process is necessary. Psychological support generates better results and treatment adherence.

Keywords: Transplanted Patients; Heart Failure; Heart Transplantation; Patient Education As Topic; Patient Assistance.

RESUMEN | Objetivo: Analizar las recomendaciones de abordajes terapéuticos y educativos en la atención al paciente en el período pre y postrasplante cardíaco. Métodos: Se trata de una revisión integradora basada en la estrategia PICO, realizada con 12 artículos generados a través de la investigación en las bases de datos LILACS; MEDLINE; BDNF; IBECs; BINACIS y COLECCIONASUS en agosto de 2019. Resultados: Se recomienda el trabajo de un equipo multidisciplinario especializado en trasplantes y educación para la salud. Un mayor nivel de educación, una mejor condición cognitiva y altos niveles de satisfacción social son predictores de un aumento en los años de supervivencia postrasplante. Los principales aspectos a trabajar son: acción de la insuficiencia cardíaca y su impacto en el organismo, tratamientos disponibles, período de recuperación, rutinas de exploración y seguimiento. Conclusión: Dada la complejidad del tema, es necesario un equipo asistencial especializado y la reflexión sobre la inclusión del cardiópata y familiares en el proceso. El apoyo psicológico genera mejores resultados y adherencia al tratamiento.

Palabras claves: Pacientes trasplantados; insuficiencia cardíaca; trasplante cardíaco educación del paciente como tema; Asistencia al paciente.

RESUMO | Objetivo: Analisar as recomendações de condutas terapêuticas e educacionais na assistência ao paciente em período pré e pós-transplante cardíaco. Métodos: Trata-se de revisão integrativa baseada na estratégia PICO, realizada com 12 artigos gerados através de pesquisa nas bases de dados LILACS; MEDLINE; BDNF; IBECs; BINACIS e COLECCIONASUS em agosto de 2019. Resultados: É recomendado a atuação da equipe multidisciplinar especializada em transplante e a educação em saúde. Maior grau de instrução, melhor condição cognitiva e altos níveis de satisfação social são preditivos de aumento nos anos de sobrevida pós-transplante. Os principais aspectos a serem trabalhados são: ação da insuficiência cardíaca e seu impacto no organismo, tratamentos disponíveis, período de recuperação, rotinas de exames e acompanhamento. Conclusão: Diante da complexidade do tema faz-se necessário uma equipe assistencial especializada e a reflexão sobre a inclusão do cardiopata e familiares no processo. O apoio psicológico gera melhores resultados e adesão ao tratamento.

Palavras-chaves: Transplantados; Insuficiência Cardíaca; Transplante de Coração; Educação de Pacientes Como Assunto; Assistência ao Paciente.

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INTRODUCTION

Heart transplantation (HT) consists of treatment for patients with severe heart failure (HF) who do not respond to drug therapy and other procedures^(1,2). With the advancement of technology and treatments for cardiomyopathies, the incidence of HF has grown in the last decades, in addition to the increase in life expectancy and the improvement in the prognosis of acute myocardial infarction contributes to the number of candidates to undergo HT elevate each year.^(2,3)

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To recommend HT, it is necessary to consider aspects that affect the success of the procedure and rehabilitation, such as: stage and progression of the disease, impact on quality of life, risk factors and expectations of adherence to post-transplant treatment. (2,4,5)

The health-disease process, whether cardiac or not, requires the individual to adapt to his new condition, sometimes temporary, sometimes permanent. The management of any disease aims at healing and/or quality of life, offering comfort and, when possible, independence. (6) For this purpose to be achieved in cardiac patients, it is necessary that professionals are willing to act in a qualified manner, in addition to promoting patient education with the necessary information about treatment, procedures and follow-up after hospital discharge. (7)

Heart transplantation does not result in an absolute cure, it is part of a process aimed at improving the quality of life

and, for this, the transplanted individual will have to adapt to certain restrictions and live with other health conditions. (4) Thus, it is necessary to understand the expectation that the CT candidate has in order to use an adequate approach to the guidelines. (7) Until the arrival of a compatible heart, the patient receives care that involves drug therapy optimized to control the progression of the disease, this is an opportune moment to resolve doubts about the living conditions and care that should be taken after the surgery. (8,9)

Due to the complexity of the HT, adaptations to the routine are necessary to maintain well-being and prevent complications, this will change the daily life and impact on personal choices, profile and way of life, the patient may have difficulties in dealing with this process and so compromising the treatment. (10)

Given the above, this research aimed to analyze the recommendations for the-

therapeutic and educational conduct in patient care during this period.

METHODS

It is an integrative review, a broad analysis of the literature to acquire in-depth knowledge based on other articles and guided through the steps: 1) definition of the research question, 2) search of the literature and selection of articles, 3) extraction of data from studies, 4) evaluation of productions, 5) interpretation of results and 6) synthesis and presentation of knowledge. (11)

The question was elaborated using the PICO method (acronym for patient, intervention, comparison, outcomes). The use of this strategy makes it possible to identify key terms for locating relevant studies. (12) The first element of the strategy referred to a patient in the pre- and post-heart transplant period (P), the second (I) in the therapeutic and educational procedures. Depending on the review, not all elements of the PICO strategy are used, in this article the third topic, the comparison (C), was not used. The fourth element refers to the factors related to assistance (O). Figure 1 shows the description of the question components and defined descriptors.

After defining the descriptors, they were cross-checked with synonyms and versions in English and Spanish using the Boolean operators "AND" and "OR". The intersections were inserted in the Virtual Health Library portal in the MEDLINE, LILACS, BDNF, IBECS, BINACIS and COLECIONASUS databases in August 2019. The inclusion criteria were: studies in Portuguese, English and Spanish, complete and available online. No time limit was established due to the scarcity of articles on the topic. Figure 2 describes the study selection path.

The following data were extracted from the studies: identification of the article, host institution of the study, type of publication, methodological characteristics of the study and assessment of methodological rigor, such information

Figure 1 - Elaboration of the question and definition of the descriptors through the PICO strategy.

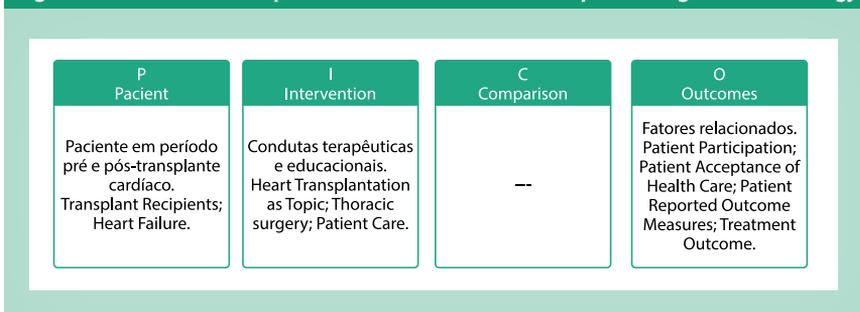
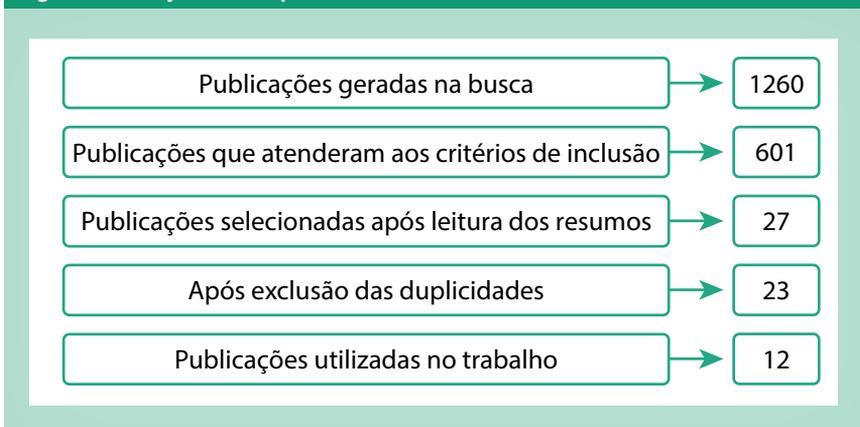


Figure 2 - Study selection path



was defined through the use of an instrument structured and validated by Ursi⁽¹³⁾ (2005). The research was validated by two researchers in order to increase the reliability of the study.

Analytical reading of the studies was carried out, identifying the key points for hierarchization and synthesis of ideas.

RESULTS

Twelve surveys that met the inclusion criteria were analyzed, these will be presented in more detail in Chart 1 which lists the name of the work and the authors, year and country of publication and objectives of the study.

As for the source language, 07 were written in English^(14-16,18,20,22,25), 04 in Portuguese^(17,19,21,24) and 01 in Spanish.⁽²³⁾ The level of evidence varies from 1 to 6, with a predominance of level 4 (42%), according to the categorization designed to evaluate research, based on the qualification of the Agency for Healthcare Re-

Chart 1 - List of articles selected for the study.

n	Título do artigo	Autor	Ano/país	Objetivo
1	Managing patients with heart failure all the way to a heart transplant	PIROZZI, R.(14)	2018 Estados Unidos	Descrever o manejo de pacientes com insuficiência cardíaca até o transplante
2	Heart transplant centers with multidisciplinary team show a higher level of chronic illness management e Findings from the International BRIGHT Study	CAJITA, MI et al.(15)	2017 Estados Unidos	Explorar a proporção dos centros de transplante cardíaco que tem uma equipe multidisciplinar e descrever a composição da equipe; avaliar a relação entre multidisciplinar e o nível de gestão de doenças crônicas em centros transplante cardíaco.
3	Learning to Live Again The Role of Education in Heart Transplant Recipients	MOHNEY, K.(16)	2018 Estados Unidos	Discutir acerca do papel da educação em receptores de transplante cardíaco
4	Vivenciando o transplante cardíaco: a perspectiva dos pacientes	STOLF, NAG e SADALA, MLA(17)	2006 Brasil	Compreender a experiência do transplante cardíaco com base nas descrições dos pacientes.
5	Health literacy in patients referred for transplant: do patients have the capacity to understand?	MILLER-MATERO, LR et al.(18)	2015 Estados Unidos	Estimar a prevalência de baixo nível de alfabetização de saúde, determinar as características de pacientes que podem ter um risco aumentado para baixos níveis e capacidades limitadas; e investigar a relação entre a capacidade de leitura, habilidade matemática, e funcionamento cognitivo.
6	O "Heart Team" para transplante cardíaco: organização e funcionamento	SEGURO, LFBC et al.(19)	2014 Brasil	Discutir a experiência do Instituto do Coração (InCor) de São Paulo, na implementação do conceito de centros transplantadores com uma equipe multidisciplinar trabalhando exclusivamente numa ampla rede que envolve o transplante cardíaco
7	Psychological assessment of patients undergoing cardiac transplant in a teaching hospital (2004 to 2012)	CUNHA, SS et al.(20)	2014 Brasil	Analisar as avaliações psicológicas de pacientes com insuficiência cardíaca aguardando transplante cardíaco.
8	Percepção de pacientes sobre o período pré-operatório de Cirurgia cardíaca	CAMPOGARA, S. et al(21)	2012 Brasil	Conhecer qual a percepção dos pacientes em período pré-operatório de cirurgia cardiovascular sobre seu processo saúde-doença, bem como sobre o procedimento cirúrgico.
9	Demographic, Psychosocial, and Behavioral Factors Associated With Survival After Heart Transplantation	FARMER, AS et al.(22)	2013 Estados Unidos	Determinar fatores demográficos, comportamentais e de qualidade de vida associados à mortalidade 5 a 10 anos após o transplante cardíaco.
10	Educación al paciente y la familia en un programa de trasplante, experiencia en CLC / Family and patient education program in transplant: clínica las condes experience	HERZOG, CO.(23)	2010 Chile	Apresentar o componente educacional entregue aos pacientes durante o processo de transplante, desde a admissão ao programa até a alta e o acompanhamento ambulatorial pós-transplante.
11	Transplante cardíaco (TC) a experiência do portador da Doença de Chagas	SADALA MLA; STOLF NAG; BICUDO MAV(24)	2016 Brasil	Investigar a experiência do transplante cardíaco.

12	Effect of Preoperative Education on Postoperative Outcomes Among Patients Undergoing Cardiac Surgery: A Systematic Review and Meta-Analysis	RAMESH, C et al.(25)	2016 Índia	Avaliar o efeito da educação pré-operatória sobre os resultados pós-operatórios entre os pacientes submetidos à cirurgia cardíaca.
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search and Quality (AHRQ) of the United States (USA).⁽²⁶⁾

Regarding the professional categories of the authors, the nurse professional stood out, present in 66,7% of the articles, doctors are present in 06 publications. Psychologists worked in two productions, biomedical and pedagogue in one research each.

All Brazilian productions^(17,19-21,24) had public health institutions as their re-

search setting, while international articles^(14,16,18,22,23,25) used only private hospitals, with the exception of an investigation produced in the United States⁽¹⁵⁾ which includes transplant centers in America and Europe, but does not report the number of public and private organizations included in the survey.

Nine studies^(14-17,19,20,23-25) highlight the effectiveness of the multiprofessional team in the search for quality of life and

reduction of mortality, 04 articles^(14,16,19,23) point out the nurse as the person indicated for the role of coordinator of the transplant team.

A survey that evaluated the presence of a multidisciplinary team in several countries reports that only Brazil and the United States have legislation that requires the multidisciplinary team to monitor these patients. Even so, the authors realized that, of the 03 Brazilian transplant centers that participated in the study, 01 did not have specialized interdisciplinary activities, (the authors considered a multidisciplinary team to be composed of at least: a doctor, a nurse and another health professional). The lack of a psychologist, social worker, pharmacist and physiotherapist was found in at least one participating Brazilian institution.⁽¹⁵⁾

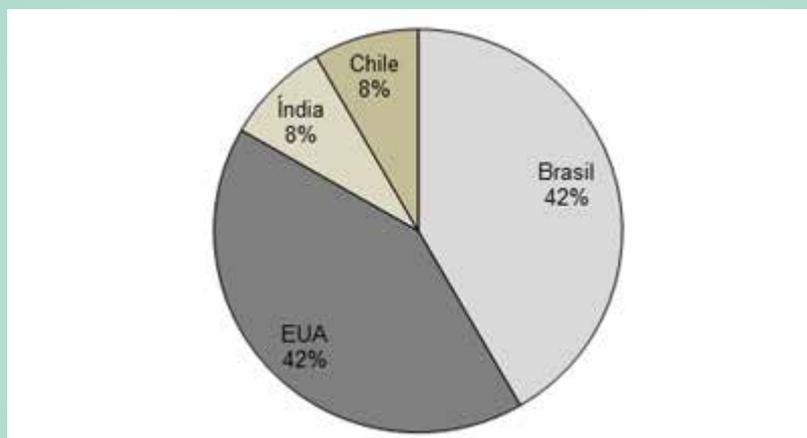
Six studies discussed the professional categories that should comprise the transplant team.^(14-16,19,23,25) Graph 2 shows the number of nominations by professional category.

Sociodemographic studies concluded that a higher level of education, better cognitive condition and high levels of social satisfaction are predictive of an increase in the years of post-transplant survival. Patients with limited health literacy tend to have a higher rate of hospitalization and risk of mortality.^(18,22)

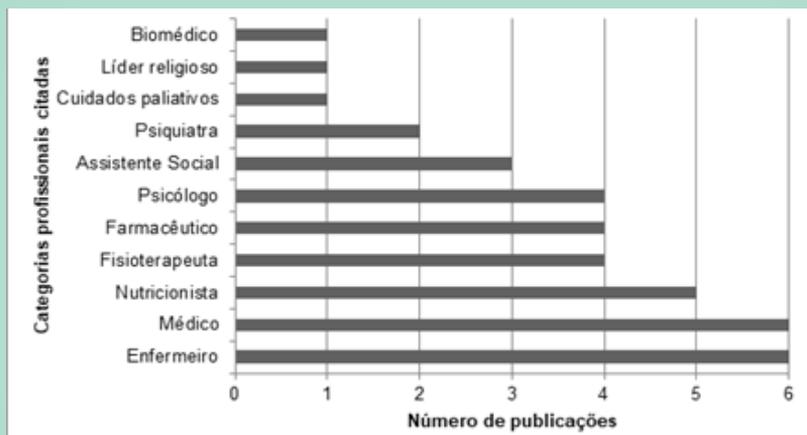
Regarding specific conducts in therapy management, disease management should be carried out by promoting symptom control and educational approach with the patient about the action of HF and its impact on the body, indicated treatments, surgical procedure, rehabilitation, eating habits, information pharmacological, physical activity, warning signs and symptoms, exam routines and follow-up.⁽¹⁴⁻²⁵⁾

As for the recognition of the limita-

Graph 1 - Distribution of studies by country of origin



Graph 2 - Composition of the multidisciplinary team indicated by the publications.



tion, 07 studies recommended carrying out research to complement the theme and reach the higher level of evidence of the findings. ^(15,17,18,20,21,24,25) Three articles indicated gaps in the literature regarding the assessment of the patient's subjective experience and the effectiveness of health education. ^(17,18,25)

DISCUSSION

In response to the guiding question, the literature recommends management through a multiprofessional team specialized in transplantation ^(14-17,19,20,23-25), treatment should seek to improve quality of life, decrease mortality, control symptoms, reduce risk factors and include the patient in a transplant queue before severe clinical worsening, in order to guarantee hemodynamic stability in the procedure. ^(14,19)

In Brazil, most transplants occur in hospitalized and unstable patients, many of whom are already dependent on the use of the intra-aortic balloon, differently from the USA and European countries, which use more advanced circulatory assistance devices that promote disease control, thus a large part of patients are referred for transplantation with better stability, which favors the success of the treatment and survival rate. ⁽¹⁹⁾

In view of the link between the positive outcome and the effectiveness of health education and psychosocial assistance ⁽¹⁴⁻²⁵⁾ it is necessary to promote patient learning according to their level of education and cognitive status ^(18,22), as for the latter, it is emphasized that the advance of organ failure can compromise the degree of understanding of the carrier of the disease, since tissue hypoperfusion and the context of social withdrawal, caused by hospitalization, affect cognition. Thus, the patient's ability to understand must be assessed daily, paying attention to the mental condition at the time of the guidelines. ⁽¹⁸⁾

The objectives established in the studies indicate the relevance of in-

vestigating the perception of the individual being treated. Research of this nature offers important subsidies to meet the needs, from the patient's own perspective. ⁽¹⁷⁾



Despite the evidence about the impact of multiprofessional activities, it is possible to notice the absence of some professionals in many places.



Lack of knowledge interferes with the patient's emotional state, people with heart disease who need surgical intervention feel low self-esteem, anxious, distressed, with thoughts of approaching death. Most of the time, this state is related to the lack of understanding of the disease, which reaffirms the team's responsibility to promote well-being by

establishing a bond and providing an environment where the patient feels free to resolve his doubts and expose their desires and expectations. ⁽²¹⁾

Numerous recommendations are perceived regarding the importance of the performance of the multiprofessional team. ^(14-17,19,20,21-25) Among the topics covered, the following stand out: timely identification of cases refractory to treatment, biopsychosocial assessment, patient care in line seeking to maintain their stability, postoperative care for rehabilitation, reintegration into the routine of life and education aiming at autonomy and self-care. ⁽¹⁹⁾

Despite the evidence about the impact of multiprofessional activities, it is possible to notice the absence of some professionals in many places. ⁽¹⁵⁾ This fact can impair the individual's and family's perception of assistance, as patients treated by a multidisciplinary team report greater satisfaction with their recovery, which impacts treatment adherence and, consequently, the survival rate. ^(17,21)

Psychological support is essential ^(14-16,20,25), cardiac transplant patients talked about the meaning of their relationships with health professionals and highlighted the bond built during treatment. ⁽¹⁷⁾ There is also the symbology to which the heart is culturally linked. Many people attribute to this organ the role of holder of feelings and emotions and its exchange can have an emotional impact. ^(17,21,24) Studies have found guilt thoughts in transplant recipients caused by the feeling of living due to the death of another. ^(17,24) Prejudice is also mentioned, the patient can perceive discrimination when returning to daily life, especially at work. ⁽²⁴⁾

The presence of nurses in the authorship of 66% of the studies is justified by the great participation in daily care and in the importance that this professional attributes to the subjective aspect, perception and feelings of the client under his assistance, all through the proximity with

the patient and his family, as he remains with them throughout the hospitalization period, and, in most cases, he is the professional to whom the patient feels more comfortable to expose his fears, doubts and expectations.⁽¹⁹⁾

The transplant team coordinator will assess compliance with the actions, carry out self-care recommendations, promote health education, develop strategies for involving the entire multidisciplinary team in the necessary care and evaluate the effectiveness of the care provided through the results obtained. 04 studies consider the nurse as a qualified person to assume this role, this is because he is a professional close to the patient, with easy establishment of an affective bond and expression of

trust.^(14,16,19,23) Another research highlights the psychologist as a professional qualified to exercise this activity.⁽¹⁸⁾

The fact that all Brazilian research is carried out in public institutions is justified by the health policies in the country that determine the performance of organ transplantation only in health and medical-surgical establishments for removal and transplantation permitted through the national management of the Unified Health System.⁽²⁷⁾

CONCLUSION

The clinical and educational management of patients before and after heart transplantation is highly complex and requires specific knowledge from the team

about this type of procedure and therapeutic approaches. Advanced HF brings to the patient feelings of fear, anguish and doubts, so it is necessary to reflect on the inclusion of cardiopath and family members in the treatment process. Psychological support is essential and the subjective aspect needs to be considered in order to generate rapprochement between professionals and patients, enabling better adherence to treatment.

The results of this study can support discussions and reflections on the importance of comprehensive care and the quality of the guidance provided, thus enabling paradigmatic changes in care.

As a limitation, the presence of research with gaps in the elucidation of the methods and objectives was noted. 🐦

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