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CHARACTERIZATION OF PEOPLE IN CARDIAC SURGERIES: A DESCRIPTIVE  
STUDY

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## RESEARCH

## CHARACTERIZATION OF PEOPLE IN CARDIAC SURGERIES: A DESCRIPTIVE STUDY

## CARACTERIZAÇÃO DE PESSOAS EM CIRURGIAS CARDÍACAS: ESTUDO DESCRITIVO

## CARACTERIZACIÓN DE PERSONAS EN LA CIRUGÍA CARDIACA: ESTUDIO DESCRIPTIVO

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## ABSTRACT

**Objective:** To characterize patients undergoing cardiac surgery at a referral hospital in northern of Ceara. **Method:** This is a quantitative and descriptive study using documentary analysis carried out by 176 medical records in accordance with the ethical aspects of Resolution 196/96. **Results:** We identified predominantly men, married, living in distant cities of the health service and a greater tendency for people over 40 years old. The hospital stay was low, contributing to reduction of risks related to hospitalization, also reducing the cost of these services, for influencing turnover and availability of beds. **Discussion:** This study shows high turnover and effectiveness of the service, allowing also envision that the primary surgery is coronary artery bypass surgery in men with the duration of hospitalization in about four days. **Conclusion:** We found that despite the risks of a cardiovascular surgery in the studied hospital, the patients recover with a great success. **Descriptors:** Cardiopathy, Heart surgery, Profile.

## RESUMO

**Objetivo:** Caracterizar os pacientes submetidos à cirurgia cardíaca em hospital de referência da região norte do Ceará. **Método:** Pesquisa quantitativa, descritiva, de análise documental realizado pela análise de 176 prontuários de acordo com os aspectos éticos da resolução 196/96. **Resultados:** Identificou-se predominância de pacientes masculinos, casados, residentes em municípios distantes do serviço de saúde com predomínio da faixa etária acima de 40 anos. A permanência hospitalar foi baixa e por isso, percebe-se redução de riscos relacionados à internação e também dos custos com estes serviços, os quais influenciam para o aumento da rotatividade e disponibilização de leitos. **Discussão:** Foi evidenciada grande rotatividade e efetividade do serviço, possibilitando também vislumbrar que a principal cirurgia realizada é a revascularização do miocárdio em homens com a duração de internação em torno de quatro dias. **Conclusão:** Apesar dos riscos de uma cirurgia cardiovascular no hospital estudado, os pacientes recuperam-se com grande sucesso. **Descritores:** Cardiopatias, Cirurgia cardíaca, Perfil.

## RESUMEN

**Objetivo:** Caracterizar los pacientes sometidos a cirugía cardíaca en un hospital de referencia en el norte de Ceará. **Método:** Estudio cuantitativo, descriptivo de análisis documental llevada a cabo por 176 historias clínicas de acuerdo con los aspectos éticos de la Resolución 196/96. **Resultados:** Se identificaron un predominio del sexo masculino, casado, viviendo en ciudades lejos de los servicios de salud con la edad predominante por encima de 40 años. La estancia hospitalaria fue baja y por lo tanto, realizar una reducción de los riesgos relacionados con la hospitalización y los costos de estos servicios, que influyen para aumentar el volumen de negocios y la disponibilidad de camas. **Discusión:** Este estudio muestra una alta rotación y la eficacia del servicio, lo que permite también vislumbrar que la cirugía primaria es la cirugía de revascularización coronaria en los hombres con la duración de la hospitalización en unos cuatro días. **Conclusión:** A pesar de los riesgos de la cirugía cardiovascular en el hospital, los pacientes se recuperan con éxito. **Descriptores:** Enfermedades del corazón, Cirugía del corazón, Perfil.

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**INTRODUCTION**

Cardiac surgery targets the heart, a vital organ that is related to the feelings of life and death. Thus, this procedure is in the context of the patient's life as a generator of great anxiety.

This type of surgery helps to improve the quality of life of patients with coronary disease, thus, nursing care should have offered a broad perspective, therefore, permeates all periods: preoperatively and postoperatively.

In this sense, the nursing care in the Coronary Care Unit (CCU), involves the continuous evaluation of the patient's general condition, identifying disturbances in hemodynamic parameters, preventing complications, providing a care plan and emergency treatment, in addition to emotional support and good communication among team members and with patients and families.

During the evaluation of nursing care in patients with heart insufficiency, an investigation was conducted sensibly through nursing consultation through a sensitive scup, and we found that 100% of the people had a lack of knowledge about the disease that affected.<sup>1</sup>

Thus nursing care begins preoperatively with physical and psychological evaluations to serve as future parameter. Investigates the patient's knowledge about the surgery and guide the need for informed consent, supports and assists the patient in coping with stress, seeking to maintain a safe operative period of admission to the rehabilitation phase where the patient and family are able to take the treatment.<sup>2</sup>

This study emerged from the experience of researchers in caring for people with cardiovascular disease in a coronary care unit. To perform nursing care, in this context, it has become necessary to characterize the clinical and epidemiological profile of patients involved as well as permanence and evolution of these. It is R. pesq.: cuid. fundam. online 2013. abr./jun. 5(2):3677-83

important for bringing the characterization of patients undergoing cardiac surgery including information regarding the permanence and cardiopulmonary bypass to allow planning of nursing care from the information obtained. This study aims to characterize patients undergoing cardiac surgery in a referral hospital in northern Ceara; identify the types of surgeries performed, length of stay in the coronary care unit and hospital care of these patients, assess the cardiopulmonary bypass time and know the evolution the same in the postoperative period.

**METHODOLOGY**

This is a quantitative, descriptive and documentary analysis. The study site was a referral hospital in Cardiology, located in Sobral, northern municipality of Ceara located 240 km from the state capital. The choice of this location was due to the ease of access and for being the workplace of one of the researchers. The study was conducted with all medical records of patients who underwent heart surgery in 2007 for a total of 176, this being also the sample.

Data collection occurred from June to August 2008 through access to records at the Department of Medical Files of the hospital, filled up a form with identification data, operative time, and length of stay in the coronary care unit and hospital and development during the postoperative period.

Data were stored in Excel 2007, analyzed and displayed in the form of figures, to better understand the results and discussed in the light of relevant literature.

This study followed the ethical and legal principles of research with humans and had the approval of the Committee of Ethics in Research of the State University Valley Acarau - UVA with

protocol number 600/2008.

RESULTS AND DISCUSSION

Initially identified the epidemiological profile of patients for better understanding of the context in which this patient are entered.

The sample characterization can be better visualized by table1.

Table1. Characterization of patients who underwent cardiovascular surgery in Sobral, 2007.

Variable	F	%
1. Gender		
Male	98	56
Female	78	44
2. Marital Status		
Married	115	65
Single	39	22
Widower	07	04
Non informed	15	09
3. Age		
Children and Teenagers	10	05
Adults	76	55
Elders	79	40
4. Origin		
Sobral	43	24
Surrounding municipalities	133	76
Total	176	100

There was a predominance of patients with stable relationships or married and residents of surrounding municipalities Sobral.

With regard to the types of surgeries performed, is displayed in Table 2.

Table 2: Distribution of cardiovascular surgery in Sobral, according to the type in Sobral, 2007.

Type of surgery	F	%
Myocardial revascularization	87	49
Exchange of mitral valve	31	18
Aortic valve replacement	31	18
Double valve exchange	09	05
Congenital heart defects	12	07
Other	06	03
Total	176	100

The relationship between type of surgery and age group was as follows: children and adolescents conducted: correction of patent

ductus arteriosus (PDA); correction Intraventricular Communication (MIC) and exchanges of heart valves and, among older adults, more surgery was prevalent coronary artery bypass grafting (CABG) with 36% (62) of cases.

Another factor studied that is paramount to the success of surgery is related to the surgical procedure. See Figure 1.

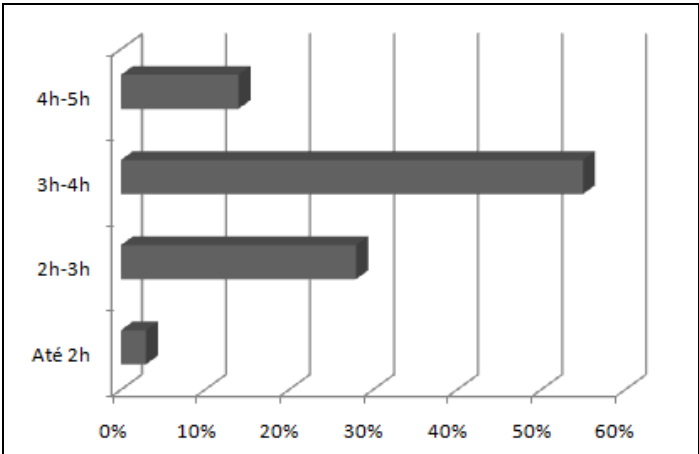


Figure 1. Distribution of Patients Undergoing Cardiac Surgery, Regarding the Time of Surgery. Heart Hospital of Sobral. Jan - Dec 2007.

The minimum time of surgery were pericardiectomy and Correction of PCA, which are simpler surgeries and surgeries of time were the double valve replacement and MRI more complex, requiring more time, so the time Extra Corporeal Circulation (CEC) also increased, becoming more vulnerable to complications. Thus we study the CPB time in which patients were submitted and identified that CPB time was more common 60 to 90 minutes, which was low.<sup>3</sup>

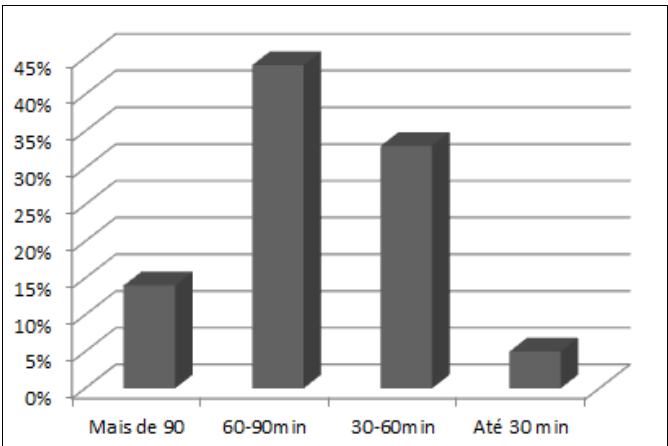


Figure 2. Distribution of Patients Undergoing Cardiac Surgery as for Extracorporeal Circulation Time. Heart Hospital of Sobral. Jan - Dec 2007.

Let's see in Figure 3, the average time spent in this sector UCO.

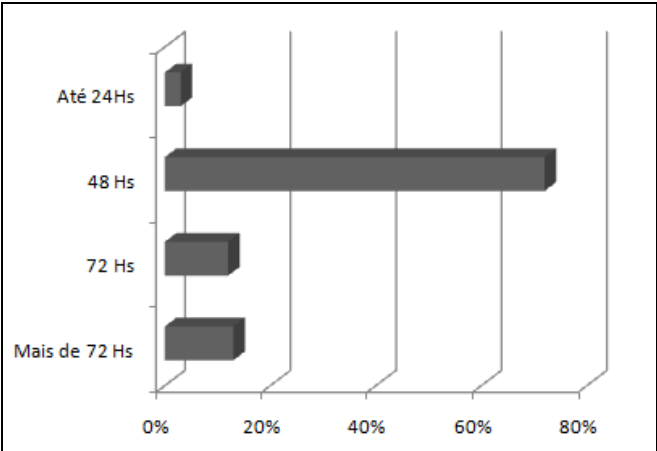


Figure 3. Distribution of Patients Undergoing Cardiac Surgery With regard to the time in UCO Postoperative. Heart Hospital of Sobral. Jan - Dec 2007.

The findings demonstrate that the shorter the length of stay of the patient in health care, better health for the patient.

In Figure 4, we see the length of stay of patients in the health service, considering the time of admission until discharge.

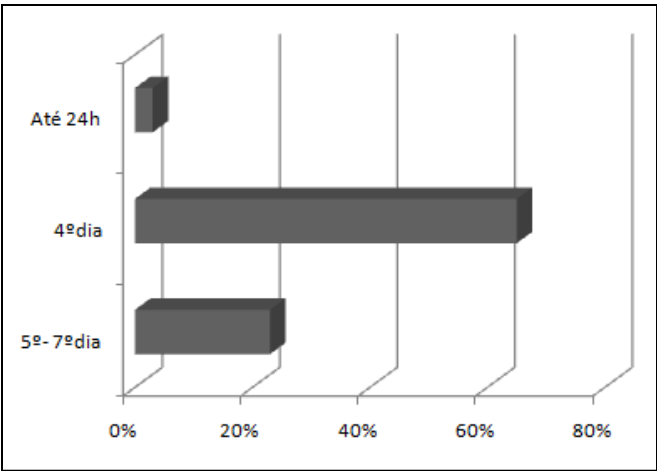


Figure 4. Distribution of Patients Undergoing Cardiac Surgery Regarding the Admission-Time High. Heart Hospital of Sobral. Jan - Dec 2007.

The study showed that the trend in relation to postoperative 90% (157) of patients developed hospital were transferred 2% (04), suffered death by 7% (13) of the patients and 01% other (02) .

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The transfer cases were hospital patients who developed heart disease not being then transferred to another hospital for continuing treatment.

Causes of death appearing on the Declaration of death were: Cardiogenic Shock 3% (05); AMI Cardiogenic Shock and 1% (02); Cardiogenic Shock associated with stroke and pneumonia 0.5% (01), with Cardiogenic Shock Mitral Stenosis 1% (02); cardiac tamponade 0.5% (01); Break Aortic aneurysm and hypovolemic shock 0.5% (01) and Septic Shock Infective Endocarditis and 0.5% (01).

The study allowed us to characterize the population served by the Heart Hospital Sobral in 2008.

As Table 1 depicts the study identified that the values in the number of men and women regarding heart surgery are practically equated with a slight predominance of men, this fact can be attributed to exposure to risk factors that men and women are submitted today. Regarding marital status and age were married men aged between 19 and 60 years who resided in counties surrounding the city searched, enabling a family care aiding in the process.

The city studied is a valuable reference for the Northern region with regard to the treatment of medium and high complexity in all age groups.

The mean duration of surgery was noted 3-4 hours being equivalent to other studies that uneventful postoperative showed a time 03h21min.<sup>3</sup>

Major surgeries were CABG patients and exchanges of the heart valves. A CABG is a safe procedure that provides the patient a better quality of life when not used extrabody circulation.<sup>4</sup> This fact is important because most patients who underwent CABG surgery in this

study was elderly and the safety of the procedure, it is essential for patients and families rely on this treatment option.

As for congenital heart disease, there was an expected increase in its prevalence. This fact we believe may be linked to increasing attempts to abortion and the indiscriminate use of medications that compromise the heart still training in intrauterine life. The corrections of congenital heart disease, this research predominated in children and adolescents.

With respect to time in extra corporeal circulation (ECC) is important to emphasize that prepares the heart to be operated, leaving it inert, and shall perform all the functions of the heart, however, it can cause harmful effects to the body because alters the physiology of the same.<sup>3</sup>

Complications increase in frequency and severity in proportion to the duration of infusion. Thus, the surgeries to be performed without unnecessary loss of time and with efficiency and safety.

The complexity of the surgery, associated with CPB, as well as the risk factors of patients may be associated with increased length of stay in the CCU.

The average length of stay was 48 hours, with 48 hours in the coronary care unit patient is well recovered, hemodynamically stable, with eliminations present, normal bleeding, that time is already being removed catheters and drains as indicated, and is already provided transfer to ward continuing treatment aimed at rehabilitation.

Most patients (72%) remained in perfect time with 48h thus having no complications or complications that prolong this time, and who had been treated in a timely manner, those who stayed 72 hours had some complications where the

stay was prolonged by 24 more hours to be subjected to appropriate therapy, and patients who stayed more than 72 hours, of these 06 (26%) died, 13 (57%) developed discharge and 4 (17%) were transferred to hospital.

In studies conducted<sup>3</sup> was identified that the average ICU in cardiac surgery patients was 2.33 days and the average ward was five days with an average of seven days of hospitalization.

Prevailed on patients who were admitted four days which shows that despite having undergone a major surgery with cardiopulmonary bypass and underwent mechanical ventilation, thus confirmed the hospitalization period identified in other studies that showed an average of 4 ,  $16 \pm 3.76$  days.<sup>6</sup>

Another point worth noting is that an average stay of four days, which helps to reduce the risk of nosocomial infection, costs of health services, as well as allows the turnover of beds leading to meeting new patients. This is a factor of satisfaction for patients, their families and health professionals who feel their work rewarded, because studies<sup>6</sup> show that increasing the length of stay of a patient in an intensive care unit are complications such as chronic obstructive pulmonary disease chronic smoking, lung congestion, prolonged mechanical ventilation weaning, diabetes, infections, kidney failure, stroke and hemodynamic instability.

In this sense, it is necessary to consider the changes that occur in long-term life of these patients, trying to identify their main needs and developing strategies to improve their quality of life postoperatively.

Despite showing the variation time of surgery was considerably low, also be inserted in the research major surgery with cardiopulmonary bypass.

Another finding was the significantly relevant patient outcomes, because there was a predominance of evolving with discharge,



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demonstrating the efficiency of all the staff who are involved in the process of surgery and the active participation of the patient and family in the care process.

Importantly, all patients who develop hospital receiving a document where they are described: the surgical report, scheduling return scheduled for 30, 60, 180 and 360 days, with available phones and e-mail contact for any questions you may have.

The death cases occurred predominantly in patients with 07 cases of RM, the others were the surgeries TVAO with 03 cases, TVM 02 patients with 01 patients and pericardiectomy. Studies<sup>4</sup> indicate that the postoperative hospital mortality was 11.7% without the use of cardiopulmonary bypass and 38% with the use of cardiopulmonary bypass, this is also an important cause of infections (35.2%), stroke (1 7%) and congestive heart failure (6.4%).

It was observed that the number of deaths compared with other studies was similar or lower than expected and cardiogenic shock a major cause of mortality in patients undergoing cardiac surgery. Targeted interventions are needed to identify early this event in order to reduce mortality from this cause.

**CONCLUSION**

Cardiovascular diseases despite all the advances are still the leading cause of mortality in Brazil.

The increase of these numbers can be attributed to several factors, including poor feeding, consumption of sodium, potassium intake, lack of control with weight, alcohol intake, adoption of unhealthy lifestyles such as smoking, physical inactivity, and lack of monitoring to manage are directly associated with important risk factors.

In the hospital studied was observed postoperatively satisfactory, yet still showing an early hospital discharge. This shows that the discharge of patients after cardiac surgery has been increasingly early with decreasing length of hospitalization.

So planning a follow-up program of patients, it has become essential to help you take your care.

An important strategy being developed right now is health education, which aims to minimize long-term complications, assist in patient adherence to prescribed treatment and help in adapting to a new health condition.

The lack of records, the medical records, in relation to other variables such as education level, monthly income, skin color, weight, height, occupation and medications for home use were limitations to further analysis.

**REFERENCES**

1. Corrêa LA, Santos I, Albuquerque DC. Nursing assessment: Research/Care through the sensible listening in the heart failure clinic. Online Brazilian Journal of Nursing. [Internet]. 2008 [acesso em 2011 nov 05]; 7(1). Disponível em: <http://www.objnursing.uff.br//index.php/nursing/article/viewArticle/j.16764285.2008.1066>.

2. Smeltzer SC, Bare BG. Tratado de Enfermagem Médico-Cirúrgica. Rio de Janeiro: Guanabara Koogan, 2009.

3. Ferreira LB, Viegas MO. Perfil Epidemiológico dos Pacientes Submetidos à Cirurgia Cardíaca no Hospital Santa Genoveva em Goiânia. [Internet]. 2004 [acessado em 2011 nov 08]. Disponível em: [http://www.ucg.br/ucg/institutos/nepss/monografia/monografia\\_16.pdf](http://www.ucg.br/ucg/institutos/nepss/monografia/monografia_16.pdf).

4. Iglézias JCR, Chi A, Talans A, Dallan LAO, Júnior AL, Stolf NAG. Desfechos clínicos pós-revascularização do miocárdio no paciente idoso. Revista Brasileira de Cirurgia Cardiovascular

Ponte KMA, Silva LF, Borges MC *et al.*

*Characterization of people...*

[Internet]. 2010 [acessado em 02 Nov. 2011]; 25(2): 229-233. Disponível em: <http://www.scielo.br/pdf/rbccv/v25n2/v25n2a16.pdf>.

5. Amorim LF, Pires, CAB, Lana AMA, Campos AS, Aguiar RALP, Tibúcio JD; Siqueira AL, Mota CCC, Aguiar MJB. Apresentação das Cardiopatias Congênitas Diagnosticadas ao Nascimento: Análise de 29.770 Recém-Nascidos. *Jornal de Pediatria Rio de Janeiro* [série da internet]; 84(1). 2008 [acessado em 17 jan. 2011] Vol.84 n.1. Disponível em: <http://www.scielo.br/pdf/jped/v84n1/v84n1a14.pdf>.

6. Laizo A, Delgado FEF, Rocha GMR. Complicações que aumentam o tempo de permanência na unidade de terapia intensiva na cirurgia cardíaca. *Revista Brasileira de Cirurgia Cardíaca*. [Internet]; 2010 [acessado em 2011 Nov 8] 25(2): 166-171. Disponível em: <http://www.scielo.br/pdf/rbccv/v25n2/v25n2a07.pdf>.

7. Magalhães MEC, Brandão AA, Pozzan R, Campana EMG, Fonseca FL, Pizzi OL, Brandão AP. Prevenção da hipertensão arterial: para quem e quando começar? *Revista brasileira de Hipertensão* [Internet]. 2010 [acessado em 01 Nov. 2011]; 17(2):93-97. Disponível em: <http://departamentos.cardiol.br/dha/revista/17-2/08-prevencao.pdf>.

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