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# Myocardial revascularization: strategies for coping with the disease and the surgical process

Revascularização miocárdica: estratégias para o enfrentamento da doença e do processo cirúrgico

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## Keywords

Myocardial revascularization; Coronary disease; Nursing; Perioperative nursing; Nursing care

## Descritores

Revascularização miocárdica; Doença cardíaca coronária; Enfermagem; Enfermagem perioperatória; Cuidados de enfermagem

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## Abstract

**Objective:** Knowing the strategies used by patients in coping with coronary heart disease and myocardial revascularization surgical procedure.

**Methods:** The Grounded Theory method was used as a methodological framework for the reading of data from a larger study entitled: Contextualizing the surgical experience and the living process of the patient undergoing myocardial revascularization. Data collection was conducted from October 2010 to August 2011, through semi-structured

interviews with three sample groups (patients, relatives of patients and health professionals) and 23 participants.

**Results:** The results indicate the strategies used by patients who underwent a surgical revascularization process, which are: family, spiritual and professional support.

**Conclusion:** The experience of cardiac surgery modifies the living process of cardiac patients and the used strategies make the experience less traumatic to them. Thus, these data provide the theoretical basis for nursing care.

## Resumo

**Objetivo:** Conhecer as estratégias utilizadas por pacientes no enfrentamento da doença cardíaca coronária e do processo cirúrgico de revascularização miocárdica.

**Métodos:** Utilizou-se a Teoria Fundamentada nos Dados como referencial metodológico para a releitura dos dados de um estudo mais amplo intitulado: Significando a experiência cirúrgica e o processo de viver do paciente submetido à revascularização do miocárdio. A coleta de dados foi realizada de outubro de 2010 a agosto de 2011, por meio de entrevista semiestruturada, com três grupos amostrais (pacientes, familiares de pacientes e profissionais de saúde) e 23 participantes.

**Resultados:** Os resultados apontam as estratégias utilizadas pelos pacientes submetidos ao processo cirúrgico de revascularização miocárdica, quais sejam: apoio familiar, espiritual e profissional.

**Conclusão:** A experiência da cirurgia cardíaca modifica o processo de viver do paciente cardíaco e as estratégias utilizadas tornam a vivência menos traumática ao paciente. Logo, tais dados fornecem base teórica para o cuidado de enfermagem.

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## Introduction

The myocardial revascularization surgery (CABG) is defined as a process of restoration and preservation of the vital capacities. It aims the return of the patient's physical, mental and social wellbeing.<sup>(1)</sup> In Brazil, in 2011, around 100 thousand cardiac surgeries were performed. Among these, more than 50% were related to myocardial revascularization, an index comparable to international literature<sup>(2)</sup>.

The discovery of coronary heart disease in most cases can be interpreted by the patient as a synonym of health loss and functional disability.<sup>(3)</sup> Facing the indication of cardiac surgery some feelings emerge, such as fear of death and rebellion against God, due to the association made between the disease onset and a superior power.<sup>(3)</sup> In this sense, the nursing professionals with their knowledge and experience can assist the patients in coping with coronary heart disease and the myocardial revascularization surgical process.

Human beings as complex forms of existence, connected with their parts and their whole, establish relationships with themselves, with others and with the environment in which they live. In order to understand one being, it is necessary to consider the established relationships, as well as respect the internal and external influences of this environment.<sup>(4)</sup> The patient with coronary heart disease requires full attention of the health team, since besides the incidence and severity of the disease, social and environmental factors shall be known for professional intervention.<sup>(1)</sup> Given this scenario, it is important to seek knowledge about the coping strategies to overcome difficulties and negative feelings used by patients who underwent the myocardial revascularization surgery.<sup>(3)</sup>

Thus, the study aims to know the strategies used by patients in coping with coronary heart disease and the surgical process of myocardial revascularization.

## Methods

This is a qualitative study of exploratory and descriptive character which used the Grounded Theory

method<sup>(5,6)</sup> as a methodological reference. The study was conducted based on the reinterpretation of data from a larger study, entitled: Contextualizing the surgical experience and the living process of the patient undergoing myocardial revascularization. In this larger study, the categories that comprise the results give visibility to a component called 'strategies', according to the study method.<sup>(6)</sup>

Data collection was developed at the Institute of Cardiology of Santa Catarina, which specializes in cardiac surgery, located in southern Brazil. The study included patients who underwent CABG, their relatives and health professionals, totalizing 23 participants divided into three sample groups. The first group consisted of eight patients. The second group was formed by six health professionals and the third group consisted of four patients and five relatives, totalizing nine subjects, respectively identified by the letters "E", "P" and "F" to preserve the identity of participants. The theoretical model was validated by a group of patients who underwent CABG surgery at the same institution.

Data collection was conducted between October 2010 and August 2011 through individual, semi-structured interviews and digital voice recording. For the beginning of the study with the group of patients the interviews were opened with: tell me about your experience regarding your CABG surgery. The interviews were directed by the researchers, from the responses of participants. The process of open, axial and selective coding was conducted during the stages of collection and analysis, from the comparison of data until reaching the study phenomenon.<sup>(6)</sup>

The comparative analysis of data of the first sample group (patients) identified the hypothesis that the health professionals who provide assistance during patients hospitalization and after their discharge participate in coping with the process of surgical myocardial revascularization. The analysis of the statements of health professionals (second sample group) pointed out the hypothesis that the relatives (third sample group) have a complicating or facilitating role in coping with the surgical process experienced by the patient with coronary heart disease.

The data analysis allowed the identification of three categories that sustained the phenomenon “realizing the process of experiencing myocardial revascularization surgery as an opportunity of maintenance of life, associated with coping with significant changes in lifestyle”, which are: realizing the family in coping with the disease and surgery; having faith and hope; participating in the rehabilitation program. The development of the study complied with national and international ethical standards.

The study complied with national and international ethical standards of researches that involve human beings.

## Results

The category called “realizing the family in coping with the disease and surgery” is composed of two subcategories. The first subcategory, called “feeling the presence and support of the family”, reveals that the presence of family members during hospitalization is motivating to patients; a joy when faced with coping with the surgical process. Without family members the patient would not even have the power to undergo surgery. This can be seen in the following statement:

They [the family members] were very important; [...] made me happier (F9).

The patient, given his state of fragility after the indication of cardiac surgery, needs the family members in the sense of searching for security and support in a strange environment, different than the usual.

It means everything! I have my kids to help me. It is better to be helped by my children than by the hands of a stranger (E5).

The family support smoothes the acceptance of surgery, with a consequent decrease in the anxiety and stress generated at the moment of surgery indication.

Without them [the family], I would have run away because it is very sad to stay in one place and not have the support of the family (F9).

According to health professionals, the family is an important ally in coping with the surgical pro-

cess because it has the role to reassure the patient. Therefore, the family is inserted in the pre and post-operative nursing guidelines to receive information, from the perioperative period until recovery and rehabilitation after discharge.

Most family members try to talk and leave the patient calm... We [professionals] mention the importance of that in the orientation (P6).

The family more or less knows how it is going to happen... This participation in the preoperative guidance is pretty cool. I say the family must be together during treatment (P2).

The family relationships, when quarrelsome, hinder the establishment of a family support net for the patient. Thus, the interference of health professionals is necessary. Sometimes the disease and hospitalization are a means of reestablishing relationships and smoothing the resolution of family issues. On the other hand, when this does not happen, these problems alter the emotional balance of the patient.

No use in bringing problems [family], no good, 'cause otherwise it will make the patient more anxious, more worried (P6).

Sometimes at home the problem is not solved, but as a family member is ill, it can be solved or become a snowball that interferes even in patients who often feel outraged, bothered with the situation (P3).

The second subcategory, called “family relationship after surgery”, shows that the relationships of family cooperation and care commonly increase after hospital discharge. Therefore they favor the recovery of patients, but the autonomy with self-care is perceived as an important factor to their rehabilitation.

After a month or so I [patient] was already here doing rehabilitation and my son came along with me. Then, later I said: you can stay home, let me go alone 'cause I don't want somebody following me around for the rest of my life (F9).

Both patients and their families face changes in family routine and in life habits after hospital discharge, which often trigger situations of stress and conflict. Pressure from the family to the patients regarding their health may reflect in reduction of their interactions and social life.

I [wife] always talk to him more calmly. I try not to be aggressive in terms of pressure, 'cause I know it's not helping... Sometimes he [patient] refrains from going to places because people talk and nag; he doesn't participate 'cause he doesn't want to hear it. I can tell he gets hurt (F4).

The category called "having hope and faith", through the subcategory called "using spiritual resources", identifies that faith and belief in a Higher Being help coping with the disease. Faith means having hope and believing everything will be alright.

My guardian angel helps me a lot. If we don't hold onto him by our side, light a little candle and say a prayer, we won't make it (E3).

Health professionals find in the faith of patients a subsidy to help them, which serves as an incentive for them to use spiritual resources in overcoming and coping with the difficulties inherent to the process of living the myocardial revascularization surgery.

I pass this part of religiosity a lot that God is there, present at the time [of the surgery], that He is standing there and everything will be just fine, they've got to trust (P3).

The category called "participating of the rehabilitation program" unleashed three subcategories. The first called "discovering the benefits of cardiac rehabilitation" refers to the possibility that family and patients attend lectures given by health professionals. The patient is encouraged and stimulated to engage in the cardiac rehabilitation program available at the institution.

I attended lectures promoted in the auditorium and it was like relaxing, having a behavior like that... less stressful and it has helped me in a general way (E6).

Besides offering cardiac patients the services of monitoring and fitness, the cardiac rehabilitation service also favors and enables the socialization of their experiences. It is considered that recently operated patients feel insecure with their health conditions and the new life habits to which they will be conditioned. Social interactions can reduce anxiety and prevent depression.

Sometimes here in rehabilitation I meet a lot of nice people. Here we chat... Sometimes there are

people who have undergone surgery 20 years ago. Then I'm glad (F9).

The second subcategory, called "cardiac rehabilitation: medical monitoring as a reward to adherence" comprehends an easier access to medical monitoring. Consequently, the prescription of medication and the request for exams are advantages offered to patients who participate of the cardiac rehabilitation program, which aims to maintain the number of adherents and the continuity of the program.

I wanna go through a battery [of medical tests]; I wanna do everything because who is in rehabilitation can schedule exams and appointments very easily there [at the hospital's outpatient clinic] (F1).

The third subcategory called "dodging difficulties of access to the cardiac rehabilitation program" reports that many patients fail to attend the program and receive the benefits offered due to financial reasons, difficulties of access, return to work routine, lack of time or lack of motivation. These patients are advised to perform daily walks or join other groups that deal with physical reconditioning, according with the cardiac surgery and the clinical condition.

It is near here where I do now... It is good here because there is a gym..., even on rainy days we do it. Yesterday we went [patient and wife]. Today we did it in the gym because it was too cold outside (F2).

## Discussion

The results showed data from the population of patients, family members and professionals of a high complexity institution. However future studies may include other subjects and scenarios of care with revascularized cardiac patients.

The family represents the most important support network used by its members in cases of illness and hospitalization. It is considered the first instance of health assistance, a producer of care actions and whose relationships constitute strategies for coping with the disease process.<sup>(7)</sup>

Through education in health, the professionals, when involved with patients and family, may favor



changes in lifestyle and the exercise of autonomy in self-care by the patient after hospital discharge.<sup>(8,9)</sup> In this sense the presence of family is valued by health professionals during perioperative orientation. Therefore, it is possible for the family to understand the coronary cardiac disease and the surgical process and consequently help the patients in coping with all that is necessary.

After hospital discharge, even with an increase in care and family cooperation aiming to favor the recovery of the patient, situations of family conflict may happen and affect the course of treatment and recovery of the revascularized patient. The return to family routine can lead to family and patient anxiety and fear of dealing with the new situation, away from the cares of the healthcare team.<sup>(10)</sup> The family member, in exercising the role of a caregiver outside the hospital environment, can assume an inflexible behavior and impose very strict rules, increasing the resistance or noncompliance with treatment by the patient.<sup>(9)</sup>

According to another study, the family relationships kept within their home settings have positive effects in the health of its members, as the characteristics of this context are directly associated with the self-care behavior that the patient has.<sup>(11)</sup> This statement reinforces the need for interaction and partnership between health professionals and family members to the success of treatment, recovery and rehabilitation of the cardiac patient.

Besides the family support network, patients have spiritual resources as a source of security, faith and hope. Faith is considered important to the patient in coping with the cardiac disease and in the search for quality of life,<sup>(12)</sup> and prayer is related to fewer complications in the postoperative period of cardiac surgery, as well as bringing positive results to health<sup>(13,14)</sup> through belief.

The health professional, particularly in the nursing area, due to maintaining a closer contact with patients during hospitalization, has to be alert, appreciate and stimulate the spiritual resources in order to promote the psychic wellbeing of the patient and ensure a less traumatic experience.

Regarding the initiation of patients in cardiac rehabilitation when they are still hospitalized,

the advantages of participating of this service are explained to patients and families by health professionals, considering the importance of an early start of physical activities. The cardiac rehabilitation program aims a quick return to the productive and active life of the patient, in the same way that the introduction of educational moments is important in the patient's preparation since the preoperative period.<sup>(1)</sup>

Besides the physical reconditioning, the cardiac rehabilitation program performed at the institution of data collection or in other spaces broadens the possibilities of socialization, interaction and exchange of experiences among patients in order to avoid anxiety and prevent depression. Evidences confirm this finding when it is verified that rehabilitation exercises based on specific and individualized recommendations<sup>(15)</sup> have a positive effect on the mental health of revascularized patients, in accordance with the prognosis of depression during the postsurgical period of these subjects.<sup>(16)</sup>

The actions of education in health should start at the hospital but the services of primary healthcare have to continue this practice. It is necessary to reinforce the importance of rehabilitation to the patient and encourage him in the practice of self-care. Studies affirm the need for patients in the cardiac postoperative period to be monitored by a primary healthcare team and these professionals should be able to assess their recovery.<sup>(15,17)</sup>

Thus, it is appropriate that health professionals of the hospitals work together with the healthcare teams of primary care service in the sense that they use the system of reference and counter-reference for patients in process of recovery from myocardial revascularization surgery.

## Conclusion

The main strategies used by patients to cope with coronary cardiac disease and the process of myocardial revascularization are based on the presence and support of the family, the quality of interfamily relationships, the use of spiritual resources and participation in rehabilitation programs that in addition to physical fitness, enable social interactions.

It appears that the experience of cardiac surgery modifies the process of living of the cardiac patient, while the coping strategies used in this process make the experience less traumatic and provide theoretical basis for the nursing care.

## Collaborations

Koerich C; Baggio MA; Lanzoni GMM and Higashi GDC declare to have contributed with the conception and design, analysis and interpretation of data; drafting and writing the article, critical review of the intellectual content. Erdmann AL contributed with the final approval of the version to be published.

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