

Physical therapy in postoperative cardiac surgery: the patient's perception

Fisioterapia no pós-operatório de cirurgia cardíaca: a percepção do paciente

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Abstract

Introduction: Many strategies to improve services for physiotherapy are based on patient's satisfaction. Listen and observe the behavior of patients in a hospital is crucial to understanding and improvement of service and the hospital.

Objective: This study aimed to identify the perception of patients undergoing cardiac surgery on the physical therapy service provided to wards of hospitals for heart surgery reference in the city of Maceió, AL, Brazil, and from that information detect what actions are perceived as priorities for which are noteworthy plans for improvements in quality of care.

Methods: Descriptive transverse study, conducted in quality and quantity of reference hospitals in cardiac surgery in the city of Maceió, AL, Brazil, in the period from September to November 2008. There were 30 patients in the study included users of the Sistema Único de Saúde, of which 12 (40%) female and 18 (60%) males. The average age of this sample was 49.2 ± 11.9 years and most belonged to socioeconomic class D (36.7%).

Results: It was found that only 16.7% had contact with the physiotherapist before surgery. Regarding educational guidelines about post-operatively, only 2.9% patients reported having received them. However, 56.8% rated the care as good and 100% of patients reported believing that the treatment could improve their physical therapy health status.

Conclusion: We suggest the implementation of protocols preoperative physical therapy with preventive measures and

educational as well as new activities that may characterize the population of users of health plans/private.

Descriptors: Patient Satisfaction. Physical Therapy Department, Hospital. Cardiac Surgical Procedures. Physical Therapy (Specialty).

Resumo

Introdução: Muitas estratégias para melhorar os serviços prestados pela fisioterapia estão baseadas na satisfação dos pacientes. Ouvir e observar o comportamento dos pacientes dentro de um hospital é fundamental para a compreensão e melhoria do serviço e ambiente hospitalar.

Objetivo: O presente estudo teve como objetivo identificar a percepção dos pacientes submetidos à cirurgia cardíaca acerca do serviço de fisioterapia prestado nas enfermarias dos hospitais de referência em cirurgia cardíaca na cidade de Maceió, AL, Brasil e, a partir dessas informações, detectar quais ações são percebidas como prioritárias para que sejam traçados planos de melhorias da qualidade do atendimento.

Métodos: Trata-se de um estudo descritivo transversal e quantitativo, realizado nos hospitais de referência em cirurgia cardíaca na cidade de Maceió, AL, Brasil, no período de setembro a novembro de 2008. Foram incluídos no estudo 30 pacientes usuários do Sistema Único de Saúde, sendo 12 (40%) do gênero feminino e 18 (60%) do gênero masculino. A idade média desta amostra foi de $49,2 \pm 11,9$ anos e a maioria pertencia à classe socioeconômica D (36,7%).

Resultados: Observou-se que só 16,7% tiveram contato com o fisioterapeuta antes da cirurgia. Em relação a

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orientações educativas acerca do pós-operatório, apenas 2,9% dos pacientes relataram tê-las recebido. No entanto, 56,8% classificaram o atendimento como bom e 100% dos pacientes referiram acreditar que o tratamento fisioterapêutico poderia melhorar o seu estado de saúde.

Conclusão: Sugerimos a implementação de protocolos fisioterapêuticos pré-operatórios com medidas preventivas

e educacionais, bem como novos trabalhos que possam caracterizar a população de usuários de planos de saúde/particulares.

Descritores: Satisfação do Paciente. Serviço Hospitalar de Fisioterapia. Procedimentos Cirúrgicos Cardíacos. Fisioterapia (Especialidade).

INTRODUCTION

Coronary Artery Disease (CAD) is a leading cause of death worldwide, being the first in the population aged 60 years or above. The incidence is increasing in developing countries, in part due to increased longevity, urbanization, and changes in daily habits [1].

Cardiac surgery can be defined as a process of re-establishment and recovery of the vital capacities consistent with the functional capacity of the heart of those patients who have previously had heart disease. Cirurgia cardíaca pode ser definida como processo de restauração e restituição das capacidades vitais, compatíveis com a capacidade funcional do coração daqueles pacientes que já apresentaram previamente doenças cardíacas. It is the process by which the patient is in search of returning to welfare from the physical, mental, and social standpoint. In recent years, it has been observed a significant increase in the number of patients with heart diseases requiring intensive care, medical, or surgical [2].

Although cardiac surgeries have evolved over the years, they are not free from postoperative complications. These are related to factors associated with the clinical and functional conditions of the patient as well as to the type of surgical procedure. Currently, the most important clinical factors are hypertension, smoking history, dyslipidemia, age, diabetes mellitus, reoperation, renal insufficiency, previous pulmonary diseases, neurological disorders, and hyperthyroidism. There is a consensus that the mortality of elderly people is more related to the functional changes of the aging itself and the medical conditions than their chronological age [3].

Damage to the chest wall due to the type of incision, use of general anesthesia, cardiopulmonary bypass (CPB), diaphragmatic dysfunction, and positioning of the drain are among the most common surgical risk factors [4]. Therefore, depending on the technique and the access route, the thoracic surgery involves extensive manipulation, leading to ventilatory dysfunction. This dysfunction includes reduced forced expiratory volume in one second (FEV1), functional residual capacity (FRC), forced vital capacity (FVC) and total lung capacity (TLC). This predisposes to the occurrence of respiratory complications,

i.e., hypoventilation, changes in the mechanism of cough might leading to hypersecretion, alveolar collapse with resulting hypoxemia [3,5-7].

The main goals of the cardiac rehabilitation programs are to enable cardiac patients to return as soon as possible to their productive and active life, despite possible limitations imposed by their disease process. Therefore, cardiac rehabilitation can be defined as the process of developing and maintaining the level of physical, social, and psychological activity after the onset of symptomatic coronary artery disease. Cardiac rehabilitation includes physical training and a broad spectrum of changes in clinical, physical and psychosocial behavior, as well as a multiple intervention aimed at modifying the risk factors (stop smoking, proper diet, stress management and sedentary lifestyle, etc.), thereby favoring the decrease in mortality [8].

Physical therapy has assumed an undisputed role in the process of cardiac rehabilitation in its hospital phase [9-13]. Up to the present day, however, little is known about how the patient perceives this process, his/her doubts, anxieties, questions, and expectations about physical therapy treatment. The questionnaires and interviews designed to assess the degree of satisfaction can clarify issues that the patients do not expose, recognizing aspects that must be addressed with more emphasis. These are designed to evaluate the patient, his/her prognosis; the impressions caused by the therapeutics used; to distinguish patients or groups of patients, and to compare types of treatment with similar rates of healing. The degree of satisfaction can be fully evaluated in most individual rehabilitation programs [14].

Currently, an important factor noted in health services is the change in the behavior of its users, who increasingly demand to be involved in decision making regarding their illness and tend to evaluate more effectively the performance and quality of the services provided, bringing out the need to evaluate the satisfaction level of care provided [14].

Measures of patient satisfaction reflect opinions, and they are subjective, undergoing changes as the patients' expectations and needs change, although the goal of the assessment remains constant. Each service should seek to

understand better their customer to serve them better with dignity and respect. All those who are engaged in this context must have beliefs and goals to perform their functions [15].

Many strategies to improve the services provided by physical therapy are based on the patient satisfaction. Listen and observe the behavior of patients inside the hospital is critical to understanding and improvement of the services as well as the hospital environment [16].

This study aims to identify the perception of patients undergoing cardiac surgery concerning the physical therapy service provided in the wards of referral hospitals for heart surgery in the city of Maceió, AL, Brazil. In addition to that information, we must be able to detect which actions are perceived as priorities in order to outline plans for improvement of quality of care provided.

METHODS

This is a cross-sectional, quantitative study carried out in referral hospitals in cardiac surgery in the city of Maceió, AL, Brazil, from September to November 2008. The study was approved by the Ethics Committee of the Faculdade de Ciências Biológicas e da Saúde – FCBS; Centro de Ensinos Superiores de Maceió – CESMAC, nº 457/08.

Initially, the researcher visited the hospital facilities. The employees had the responsibility to report the routines of the sectors. The researcher was given autonomy to access the medical records to collect data, such as personal information, date of surgery, clinical evolution, hemodynamic evaluation and any data that could be significant to the research.

The sample size was chosen by considering the proportion of the population in cardiac surgery (2%) in Alagoas with accuracy of the absolute estimate of 5% and a significance level of 5%. Patients were approached in the wards of hospitals at the time of the visit of the researcher, and those who met the inclusion criteria of the research were enrolled. We included 33 patients of both genders, older than 18 years, 13 women and 20 men who underwent heart surgery and who were admitted on the 5th or 6th postoperative day under physical therapy treatment. All patients were under the Unified Health System (SUS) medical assistance agreement. The patients were explained about the research objectives, and those willing to participate were asked to sign the Free Written Informed Consent after reading the document.

After the free written informed consent was signed, a Mini Mental State Examination (MMSE) questionnaire was applied [17]. The questionnaire consists of 19 questions and aims to assess the patient's cognitive ability. The aim of the questionnaire is to evaluate the patients' temporal and spatial orientation, immediate and delayed recall,

attention, naming, repetition, three-stage command, reading, copying, and writing. The test has a maximum score of 30 points, where 21 points are the minimum necessary to be considered cognitively fit.

Those deemed fit in the Mini Mental State Examination questionnaire were asked to answer the socioeconomic classification based on the Brazil Criterion of IBOPE (Brazilian Institute of Public Opinion and Statistics) Index 2008 [18], which stratifies the socioeconomic classes into five categories: A1 (average household income of R\$ 9,733.00), A2 (average household income R\$ 6,564.00), B1 (average household income of R\$ 3,479.00), B2 (median household income of R\$ 2,013.00), C1 (average household income of R\$ 1,195.00), C2 (average household income of R\$ 726), D (average household income of R\$ 485), E (average household income of R\$ 277). Calculation is done through a scoring system based on ownership of consumer goods and education level.

All the study participants were asked to fulfill a structured questionnaire developed by the researchers. The questionnaire consists of 11 questions focusing on items, such as routine of medical care, physical therapist's attention, guidance given in the treatment, the safety during the procedure, among other questions. To meet the objectives proposed, the research design used was the type-survey, which involves a structured questionnaire applied to a sample population in order to obtain specific information from respondents about attitudes, opinions, behavior, and motivations [19].

Personal data and the answers to the questionnaire questions were analyzed by descriptive statistics, expressed in percentages and mean and standard deviation. The storage and analysis of the data held in Microsoft Excel® spreadsheet for Windows v.2003.

RESULTS AND DISCUSSION

Data collection was carried out from September to November 2008. The sample consisted of 33 consecutive patients, three of which were excluded because they did not reach the minimum score of 25 points on the Mini Mental State Examination. The study included 30 patients, 12 (40%) were female and 18 (60%) were male. The mean age of this sample was 49.2 ± 11.9 years. The age, socioeconomic, and gender profile of the participants is shown in Table 1. It was observed a distribution of the patients in classes B2, C, D, and E, with the majority (36.7%) of the patients allocated in class D, which is justified by the fact that all patients are under the Unified Health System (SUS) medical assistance agreement.

Table 2 presents data on questionings related to the preoperative period.

These data are a preoccupying factor [20], because the

patients undergoing physical therapy intervention in the preoperative period have significantly reduced the number of postoperative complications compared with those who only receive postoperative intervention. Physical therapy in the preoperative period is intended to guide and assess patients in order to identify risk factors that may increase the incidence of pulmonary complications and to allow the institution to conduct the most appropriate physical therapy [21].

The limitation in order to have a preoperative follow-up would be the increased hospital costs of the anticipated hospital admission. However, commenting that with a few sessions before surgery is still possible to reduce the number of postoperative complications [20]. Thus, it is justified the need for routine preoperative physical therapy

guided by the reduction of post-surgical complications, translating it into a greater economy and better ratio cost-benefits.

Data regarding the frequency and duration of physical therapy at the hospital, targeting the recovery of heart surgeries are shown in Tables 3 and 4.

When the patients were asked about the length of sessions, it was seen that the length of the session was optimal in relation to literature data because 76.7% of the patients reported they have been treated in a length of time between 10 and 15 minutes. According to the literature, "the recommendation is that the "supervised exercise sessions should be performed at least twice a day, usually ending in 10 to 15 minutes, including the time to both education and informal conversation" [22]. The initial

Table 1. Gender, age, and socioeconomic status of the patients.

Gender	n	%	Age	N	Socioeconomic Status	n	%
Female	12	40	Lowest	20	A1	—	—
Male	18	60	Highest	64	A2	—	—
			Mean	49.2	B1	—	—
			Standard Deviation	11.9	B2	2	6.6
					C1	3	10
					C2	5	16.8
					D	11	36.7
					E	9	29.9

Table 2. Questionings related to the preoperative period.

Preoperative	Yes	%	No	%	N.D.R.*	%
Have you seen the physical therapist prior to the operation?	5	16.7	25	83.3	—	—
Were you given any instructions or lecture regarding your physical therapy treatment prior to the operation?	9	29.9	21	70.1	—	—

* I would not wish to answer the question **Source: Research data

Table 3. Questioning related to the attendance at the sessions.

Frequência das sessões	Once a day	%	Twice a day	%	Three times a day	%	More than three times a day	%	N.D.R.*	%
The patient was seen by a physical therapist after the operation	11	36.7	10	33.3	6	20.1	1	3.3	2	6.6

* I would not wish to answer the question

Table 4. Questioning related to the length of the sessions.

Length of a session	Less than 10 minutes	%	10 a 30 minutes	%	More than 30 minutes	%	N.D.R.*	%
Which was the average time of the session?	5	16.7	23	76.7	2	6.6	—	—

* I would not wish to answer the question

duration of the sessions should be 5 to 10 minutes, progressing gradually from 20 to 30 minutes [23].

The reality found is not consistent with the literature when the frequency of sessions is verified, because the data collected show that the highest percentage of patients was treated only once a day (36.7%).

With regard to the respect of the physical therapist with the patient, all the patients reported they have received professional attention and respect from the professional they were attended by. The professionals were shown to be sure of themselves during their conduct were reported by 93.4%. The patients (79.9%) also reported that the professional used an easy to understand language to explain to them the purpose of the techniques and maneuvers used in their treatment.

This uniformity of views on the attitude of the physical therapists can be justified by the fact that the patients are changing their profile, increasingly demanding to be involved in the decision making about their treatment, and they always expect improvements in care delivered. In view of the facts, physical therapists also are changing their habits, so they can meet the expectations of these patients.

We also evaluated the patients' perceptions about the importance of physiotherapy in the postoperative period, by asking them about the knowledge of the reasons by which they had to do physical therapy after surgery. The answers obtained were the following: 43.4% of the patients said they knew the reasons and 56.6% indicated they did not know why. However, those who claimed to know the reasons why they needed therapy no one could not make a list of the reasons spontaneously nor could specify how physical therapy could improve their postoperative conditions. Nonetheless, 100% of the patients reported they believe the physical therapy treatment could improve their health.

The physical therapy in the hospital aims to avoid the negative effects of prolonged bed rest, encourage to faster return to daily physical activity, maintaining functional capacity, developing patients' confidence, reduce the psychological impact (such as anxiety and depression), prevent pulmonary complications, maximize the chance of early discharge and provide the foundation for a home-based program. This was observed when patients were asked why they believe that physical therapy might improve their health status. Fourteen of them expressed that with physical therapy, they "would get better faster" and they "would return to normal life shortly after surgery [24].

As for the overall quality of care delivered, 9.9% of patients described it as fair, 56.8% as good, and 33.3% as great. This shows that the sample is satisfied with the service provided.

However, when these patients were given the opportunity to suggest improvements in the health care

delivered, it was found that many of them expressed similar opinions, requesting that the care attendance routines should happen more times per day. This view can be justified by the fact that these patients really believe that physiotherapy can improve their condition. Therefore, they can return more quickly to their daily activities.

CONCLUSION

Based on the perspective of the patient, we can conclude that physiotherapy in cardiac surgery contributes to the success of the postoperative rehabilitation process, but it leaves much to be desired in relation to evaluation and the preoperative care, as well as in relation to the educational and informative support that contributes to the understanding of the surgery subsequent steps.

The results of this study allow us to suggest the implementation of protocols that focus on the preoperative physical therapy, perhaps the main weakness found here. It is necessary in this period, in addition to the careful anamnesis, the establishment of instructional moments where one can prepare the patient for the critical postoperative period either through lectures or information at the bedside.

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