CLINICAL ASPECTS

NURSING PRINCIPLES IN PATIENTS WITH CARDIAC PACEMAKER

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Keywords: cardiac pacemaker, nursing, principles

Abstract: Permanent cardiac pacemaker represents the long term (years) cardiac stimulation, performed with a pacemaker pulse generator placed inside the patient’s body (implanted under the skin). The aim of this study is to analyze the duties of the nurse in nursing the patients with pacemakers and the quality of care of these patients. The study was made at the Railway General Hospital Sibiu on a group of 20 patients hospitalized in the Internal Medicine department for a period of 6 months. In this group, there was applied a questionnaire containing eight questions with multiple choice answers. After analyzing the responses of patients, it was concluded that the implanted patients’ satisfaction is very high, the objections addressing some minor deficiencies, which often are not the nurse’s fault.

INTRODUCTION

Due to continuous progress of medicine, the average age of the population increased continuously and therefore, it also increased the rate of specific diseases of third age. Decreased heart rate due to atrioventricular block or sinus node disease is generally a medical condition affecting the population of more than 60 years old.

These disorders are relative medical emergencies, as patients may die suddenly. Until the advent of cardiac pacemakers, there was no appropriate treatment of these disorders, the patients receiving only pharmacological treatment, which was ineffective with many side effects that did not provide a better quality of life.(1)

Cardiac pacemaker has been a revolution in the medical world. It is a relatively new medical modern technology, with a trend towards continuous improvement, which is essential for the survival of these patients. Life expectancy and outcome of patients with brady–or tachyarrhythmias was fundamentally changed by the introduction of pacemakers, being comparable to those of the same age (unless suffering from chronic conditions that adversely affect prognosis).(1)

PURPOSE

The purpose of this study is to analyze medical assistant duties in caring the patients with pacemakers and their quality of care in the context of increasingly more patients diagnosed with these diseases.

METHODS

The study was made at the Railway General Hospital Sibiu on a group of 20 patients admitted to the Internal Medicine Department between 1 January to 30 June 2012, to which a questionnaire was applied, containing eight questions with multiple choice answers. The content of the questionnaire is:

1. What you know about your disease and the necessary treatment
   a) very much
   b) a lot
   c) too little
   d) none

2. Were you given information on the medical condition you are suffering from or the need for implant?
   a) many
   b) some
   c) too few
3. Who did provide such information?
   a) physician
   b) resident doctor
   c) nurse
   d) family

4. Are you satisfied with the quality of care offered in our clinic?
   a) yes
   b) no
   c) somewhat satisfied

5. To what extent have nurses accomplished their duties in relation to your disease?
   a) fully
   b) partially
   c) too little

6. Have you ever been disappointed with the performance of a nurse?
   a) yes
   b) often
   c) very rare
   d) no

7. Did nurses explain in your words all you have to do so that the treatment to succeed?
   a) yes, very clear
   b) vaguely
   c) I understand
   d) I did not understand

8. What are your complaints about the nurses who have cared you?
   a) absolutely nothing
   b) the lack of solicitude
   c) low delay in administering the medication
   d) slight impairment of the patient's need for rest, by a too sudden awakening when taking the medication during the night
   e) staff do not always apply ice pack or bag of sand on the implant, but requires the patient or the auxiliary staff
   f) lack of professionalism (faulty vein puncture etc.)
   g) lack of courtesy.

The number of female patients was approximately equal to that of the male patients, also for the urban – rural environments. Training of patients was selected to be different from primary to higher education.

RESULTS

On the question of level of information, five patients responded that they know a lot - 25 %, ten patients said they know a lot - 50 %, and five claimed that they know too little (25 %). It is relevant that no patient claimed to have no information. The amount of information relevant to the studied age groups is shown in figure no. 1.

Figure no. 1. Batch distribution according to the level of information

At the question “Were you given information on the medical condition you are suffering from or the need for implant?”, the proportion of responses was as follows: 25 % answered they were offered a lot of information, 65 % or 13 people answered they received few information and only 2 people or 10 % have claimed that they were given too little information, these people were a woman of 87 years old and a man of 89 years old. No one claimed that he/she was not informed – figure no. 2.

Figure no. 2. Batch distribution according to the information received regarding the medical condition or the need for the implant

To question 3, “Who did provide such information?”, eight patients responded the physician (40 %), six patients responded the resident doctor (30 %), four patients said nurse (20 %) and only two patients had received this information from the family (10 %) – figure no. 3.

Figure no. 3. Batch distribution according to the person who provided information about the disease and the need for implant

The quality of medical services provided were declared totally satisfied by 17 patients (85 %), only three said they were somewhat satisfied (15 %), but they did not want to elaborate on the reasons for the partial lack of satisfaction. To the question “to what extent have nurses accomplished their duties in relation to your disease”, most interviewed patients, 18 people (90 %) felt that nurses have fully met their duties. Only 2 people (10 %) felt that the duties have been fulfilled only partially their duties. The reasons why these patients chose to respond as such were minor and were not related to the conduct of nurses, but rather to some shortcomings unavoidable under the current conditions (understaffed) and the subjectivity of the two respondents. Disappointed with the performance of a medical assistant were only two people, and 18 patients (90 %) were not disappointed.

To the question “did nurses explain in your words all you have to do so that the treatment to succeed”, the majority of the interviewed patients (75 %) responded that nurses have clearly explained what to do for the success of care. The remaining 5 people or 25 % said they only understood. There were no respondents who claimed to have not understood or understood only vaguely what to do, which leads to the idea that nurses were able to make themselves understood – figure no. 4.
Complaints about nurses were made only by two people and refer to small delays in the administration of medication and the fact that the staff nurses do not always apply ice pack or bag of sand. From the detailed discussions with these two patients, it showed that delays in medication administration were 5-15 minutes so insignificant, and the application and maintenance of antihematoma systems did not involve discomfort for the patient. Both complaints were as a result of the insufficient personnel deficiency due to the current economic situation. The working high standards of the medical team in this department are evident taking into consideration the absence of complaints regarding the lack of care, courtesy and professionalism.

DISCUSSIONS

Permanent cardiac pacemaker represents a long term (years) cardiac stimulation, performed with the pacemaker pulse generator that is inside the patient’s body (implanted under the skin). Pacemakers occurred in the early 1960s. Although significant alterations in dimensions or weight, their action principle remained the same. The first device of this type was invented in 1960 by Leon Abrams and then produced by Lucas Industries. It has been used to treat patients for 20 years and was later replaced by more sophisticated devices because the battery had a short life and its circuits were not very reliable. Later on, there were new devices to ensure safety and a much better performance, aiming at a better quality of life for the implanted patients.(1)

At present, there have been developed implantable electronic devices that can be used both in the treatment of bradyarrhythmias and tachyarrhythmias. The most common indications of cardiac pacemaker are the sinus node disease (45 – 58 %) and atrioventricular block (34 – 47 %). Rarer are those of the carotid sinus syndrome syncope or neuro-cardiogenic (3 to 4.5%).(2)

Continuous stimulation at the apex of the right ventricle (RV) is the most used, being accessible, having stable electrode position and stimulation threshold. We studied the comparative effects of stimulation at the right ventricular apex to the septal level stimulation. Short and medium-term effects on the left ventricular function and the synchronization were similar, with no major differences. Therefore, suitable implantation site may depend on the individual characteristics of the patient.(2)

In the last decade, and in parallel with the global trend, cardiovascular medicine in Romania has grown explosively, as a continuous avant-garde specialty, so that the medical staff engaged in combating this scourge of the heart disease was increasingly required for a tool for them to get used to the possibilities, risks and limitations of the new methods of treatment of cardiology and to provide a current and operational organizational model of the therapeutic strategy and plans of care in the dramatic confrontation with the greatest medical challenge of the new century, the cardiovascular disease.(3)

CONCLUSIONS

1. The implanted patients’ satisfaction is very high, any objections addressing some minor deficiencies, which often are not the nurse’s fault.
2. Awareness of patients with pacemakers can be high.
3. It is necessary to intensify health education of the population on hygienic-dietary regime, medication, evolution, complications and medical checks and more intensive involvement of all health professionals (physicians, nurses, other persons) in health education with the cooperation and support of the family.

REFERENCES