International Journal of Basic and Applied Research
Special Issue (254-255)
ISSN - 2249-3352

Long Breathing Cures the Ectopic Pace Maker

**Sk.Kalim, Sk.Hanis ,Vanita Sagane ,Shital Jadhao,
Rachana Khandelwal,Smita Chauhan**

Department of Physics, Sant Gadge Baba Amravati University, Amravati, India

Key word:
Arrhythmia,
Premature Contraction,
Ventricle,
Pace Makers

Abstract: A person suffering from the arrhythmia reported to our institution. We recorded the Electro Cardio Gram (ECG) and found that the arrhythmia is because of ectopic pace maker. We advised him to take repeated long breathing. Two minutes after starting the long breathing the ECG became normal and the person starts feeling fresh.

Introduction

The heart disease is one of the mass killers in the world. The arrhythmia may lead to the uneasiness and giddiness. In the human heart SA node, AV node, bundle of his and Purkinge fibre act as Pace makers. When the action potential is generated by some other portion of the heart it is called as the ectopic pace maker. We studied the effect of the long breathing on the arrhythmia caused because of ectopic pace maker. It is found that because of long breathing the heart is fully recovered from the said disease.

Experimental

A 58 year old person was not feeling well and he was having giddiness and dizziness. We recorded the ECG of the person which is displayed in figure 1. The case belongs to a kind of arrhythmia, which may be identified in different ways [1-4].

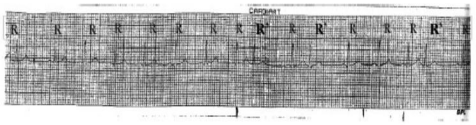

Figure 1: ECG of a subject before Long Breathing

The ECG of the person displayed in figure 1 shows premature contraction of the ventricle [5]. It is found that there is an ectopic pace maker which has become active. As soon as T wave of a beat is terminated the part between T wave and P wave of the successive beat and the P wave itself disappeared and the QRS complex of the next beat shows its appearance. As soon as the ventricle gets fully repolarised the ventricle starts depolarizing without waiting for the receipt of the action potential generated by the SA node. The SA node in the person generates the pace regularly because after the irregular beat the subsequent beat gets delayed. The interval between R-R'-R in the figure is about 1.4 second which is two times R-R interval.

We ask the person to start taking long breathing. As per the advice the person started taking long breathing. We continuously go on recording the ECG and found that after about two minutes the ECG starts showing different shape. The recorded ECG is shown in the Figure 2.

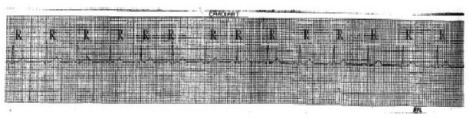

Figure 2: ECG of a subject After Long Breathing

The ECG is almost normal and the person started feeling well.

Results and Discussion

When a person starts the activity of long breathing the following sequence of the processes takes place. In the beginning of the long breathing the lungs expand and its volume

increases as well as the air pressure in the lungs also increases. After inhalation of a particular amount of air the lungs reach the state when its volume becomes maximum. As the person inhales more air the volume of lungs remains same but the pressure inside the lungs increases consequently increasing density of oxygen molecules. When the volume of the lungs becomes maximum the walls of the lungs are stretched and the diffusion coefficients of the walls for the oxygen and carbon dioxide increase. Thus the rates of diffusion of oxygen and carbon dioxide across the walls increase. More oxygen enters from the lungs into the blood capillaries and combines with hemoglobin to convert it into oxyheamoglobin. Thus the level of oxygen in the blood is increased. At the same time carbon dioxide in the blood comes out of the capillaries and enters in to the alviolli. Thus the level of carbon dioxide in the blood is decreased. The walls of the heart get more oxyheamoglobin and the carbon dioxide in the blood decreases. This may decrease the carbondioxide level in the cells also. As a result of this the heart get sufficient amount of oxygen and the heart beats become normal. The part of the heart which was generating ectopic pace stops the generation of the pace.

In the laboratory we are planning to study the effect of various nutrients and oxyheamoglobin on the working of the heart. It is also found that the long breathing helps in giving relief to the persons having stresses and tension. The experiments are being done in details to study the effect of long breathing on the heart of a person who is having stresses and tension. It should be noticed that the recovery of the trouble dose not need any drug.

It may be concluded that the ectopic pace making is a result of the deficiency of oxygen and nutrients. This type of trouble may be record by long breathing.

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