Electrocardiogram (EKG)

Veronica Frattaroli, Biomedical Engineering, University of Rhode Island

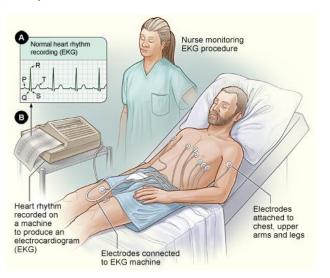
BME 281 First Presentation, October 18, 2011 <vfrattaroli@my.uri.edu>

I. Introduction

An EKG is a test that checks for problems with the electrical activity of your heart. This test is done for many different reasons. Some of the main ones are to look for early symptoms of heart disease, to check the health of the heart under the conditions of other diseases like diabetes or high blood pressure, and to check how well mechanical devices, like pacemakers, are working. The first report of someone measuring the electrical activity of a heart was in 1872 when Alexander Muirhead attached wires to a patient with a high fever to record their heartbeat. In my presentation, I will go on to talk about Willem Einthoven who made a big breakthrough with an actual machine that could measure the electrical activity of the heart.

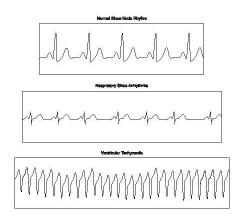
II. Methods

The procedure for an EKG is very simple and noninvasive. The patient is asked to lie on a table while small sticky electrodes, which are connected to the machine, are applied to their chest, arms and legs. They are then asked to lie very still while the technician records the results.



III. Results

There are many different outcomes at the end of an EKG. Some results just say that your heart's activity is fine and there's nothing to worry about. But other results include the diagnosis of heart disease, damage to the different heart muscles, and slightly impaired blood flow to the heart muscles. Though there are many results, the paper results all look similarly.



IV. Discussion

In conclusion, EKGs are very helpful, mainly for detecting heart disease at an early stage and to check the health of the heart when conditions like high blood pressure and diabetes are present. Since the heart is one of the most important muscles in the body, then we need a machine to make sure that it is always working properly.

References

- ~http://www.webmd.com/heart-disease/electrocardiogram
- ${\sim} http://en.wikipedia.org/wiki/Electrocardiography\#EKG_graph_p \\ aper$
- ~http://www.heartsite.com/html/ekg.html
- ~http://www.medicinenet.com/electrocardiogram_ecg_or_ekg/art icle.htm