**STATE-OF-THE-ART HOLTER MONITORING: CURRENT USES AND PROSPECTS**

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Heart diseases are one of the leading causes of death among women and men worldwide particularly in the developed world. However, before death occurs, most times there are always signs that could be detected early which if acted upon might reduce the incidence of deaths. There are many cases of sudden death due to heart attacks even in presumed healthy people hence, it became imperative that early methods of detection of heart attacks be invented. One of the early methods of detection in use today is Holter monitoring which is done using the Holter monitor.

The Holter monitor was invented by American biophysicist Norman “Jeff” Holter and through his collaboration with Bruce Del Mar, it was developed into a commercially viable device. The rights for the Holter monitor was donated by the inventor to medicine. The first Holter device was about the size of a radio set. Improvements with the Holter device have gone in the same direction with improvement in computerization especially with the mechanical details, circuitry, accuracy and reliability due to the advent of microprocessors. With the invention of smaller storage devices such as chips, tapes were replaced thereby making it possible to produce smaller devices. Most Holter devices of today are about the same size with a small camera.

Holter monitoring helps the doctor to know if the medications are working well, why a patient might have such symptoms as dizziness and if the heart is getting a good supply of Oxygen. A technician places electrodes on the respective parts of the patient's chest and connects the electrodes to the Holter monitor. Patients are then sent home to continue their daily routines after receiving a Holter event diary where they record what they did at different times of the day. This diary is usually interpreted by the technician to help patients understand when they had an abnormal heart rhythm and what they were doing at that time.

One major advantage of the Holter monitoring is that it can detect abnormal electrical activity in the heart that might randomly occur during periods of sleep and increased physical activity. Also, the patient is not required to do anything extra other than return the device to the hospital after the test. There are also no known risks associated with the device.

The only disadvantage associated with the Holter device, apart from the fact that it costs hundred of dollars is that patients must keep a diary of daily activities so that the technician can interpret abnormal readings. However, most patients usually comply because they know heart diseases are a major issue.

The future of the Holter monitor seems very bright. Already, researchers working in the university of Nottingham have invented the world’s first fetal/maternal heart monitor that will allow mothers and their doctors to monitor a baby’s health outside of the hospital. Doctors believe that the more they can monitor babies, the greater the chance of them detecting that they are running into difficulties before it is too late to help them.

Registration card

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**Oral presentation -** Ekott, Nyikkeabasi Bassey, A. Demydenko **STATE-OF-THE-ART HOLTER MONITORING: CURRENT USES AND PROSPECTS**