The Use Of Cardioversion To Correct Cardiac Arrhythmia

Have you ever felt like your heart was racing, fluttering or skip a beat? This can be a sign of cardiac arrhythmia and it is common especially in older adults. If you experience this occasionally they are usually harmless. However, some arrhythmias that last longer can be critical and require management and treatment. Cardiac arrhythmia is a class of conditions in which the electrical activity of the heart is abnormal. One way to correct certain arrhythmias such as atrial fibrillation and atrial flutter is by performing a medical procedure called “Cardioversion”. As a group, we will like to explain why it is important to distinguish when cardioversion will be used versus defibrillation.

According to heart.com website, “Arrhythmias can produce a broad range of symptoms, from barely perceptible to cardiovascular collapse and death.” There are different diagnostic tests used to confirm arrhythmias. We will also explain the two types of cardioversion procedures used to correct an irregular heartbeat and what occurs before, during and after cardioversion. We will discuss nursing implications including patient education throughout the process of a cardioversion procedure.

An arrhythmia is a change in the rhythm of your heartbeat. Arrhythmias are more serious if you have other heart problems. Cardioversion is a corrective procedure to change or convert an irregular heart rhythm back to normal sinus rhythm. This procedure is usually elective, the patient is awake but sedated and a consent form must be signed prior to the procedure. According to heart.com website, cardioversions are done to treat atrial fibrillation (AFib) or atrial flutter (AFL) and non-life threatening irregular rhythms in the top of the heart. It is also used in less urgent cases to try to convert the rhythm back to normal.

Defibrillation is for immediately life-threatening arrhythmias, the patient does not have a pulse such as ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT). The goal for both is to deliver electrical energy to the heart to shock the heart temporarily allowing a normal sinus rhythm to kick in via the heart's normal pacemaker. For cases where an electrical shock is needed, if the patient is stable, and you can see a QRS-t complex you will use (LOW ENERGY) synchronized cardioversion. However, if the patient is pulseless, or if the patient is unstable and the defibrillator will not synchronize, you will use (HIGH ENERGY) unsynchronized cardioversion (defibrillation).

Patients who have arrhythmias can be asystematic. When arrhythmias last long enough to upset how well the heart functions, more serious symptoms can occur such as syncope or near-fainting spells, chest pain and fatigue. In severe cases, collapse and sudden cardiac arrest can

emerge. Diagnostic tests used to confirm arrhythmia are chest x-rays, blood tests, stress test and electrocardiogram.

There are other tests or procedures used to determine arrhythmias; however, an electrocardiogram is the most common. ECG is used to check for signs of heart disease. It's a test that records the electrical activity of your heart through small electrode patches that are placed on the chest, arms, and legs. The ECG diagnostic test is commonly used because it’s reliable, fast, safe and painless.