

## **ENHANCED EXTERNAL COUNTER PULSATION (EECP) THERAPY**

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A new non surgical outpatient treatment for patients with blocked heart arteries (coronary artery disease) and chronic heart failure has been introduced into the region and the country.

Dr. Robert Mathenge, interventional cardiologist at the **Equatorial Heart and Blood Vessel Clinic**, based at the **Nairobi Hospital** says that this non invasive procedure is mainly for patients who do not have the option of standard surgical techniques such as balloon angioplasty and stenting or the traditional bypass surgery. These also could be patients who have already undergone these procedures but are still unwell with symptoms such as chest pain, fatigue or shortness of breath. These patients are often referred to as ‘No option patients’. This procedure has been proven to reduce or eliminate chest pain, shortness of breath and significantly improve quality of life. For people with angina or heart failure, even simple activities — such as going to the mailbox or walking the dog can be challenging.

### **What is EECP Therapy and how does it work?**

The treatment, referred to as **Enhanced External Counter Pulsation (EECP)** is usually given for an hour each day, five days a week, for a total of 35 hours. During the treatment, a patient lies on a comfortable treatment table with large blood pressure-like cuffs wrapped around the legs and buttocks. These cuffs inflate and deflate at specific times between patients heartbeats. A continuous electrocardiogram (ECG) is used to set the timing. The cuffs deflate at the end of that rest period, just before the next heart beat. The cuffs are inflated at high pressure when the heart is relaxed (diastole) and deflated quickly just before the heart pumps forward (systole). A column of blood volume and pressure is transmitted backwards towards the heart and the heart arteries which are pushed into the blocked vessels. This pressure created into the blocked arteries enlarges the narrowed arteries and results in natural by passing vessels to open up and grow across the blocked arteries referred to as collaterals. This inflation and deflation occurs with each heart beat.

Studies have shown that patients with heart failure can also benefit if even after maximum medication they are still short of breath and not enjoying a good quality of life. This procedure is fully recognized by regulatory bodies such as; American FDA, American Heart Association, American College of Cardiology and also the European society of cardiology. The benefits of doing a 35 hours course of treatment over 3 to 7 weeks are noted to persist for 3-5 years. The centre at **Equatorial Heart and Blood Vessel Clinic at Nairobi Hospital** is the only one in the country and in the region outside South Africa offering the procedure at this time. This is a low cost procedure, costing much less than standard angioplasty and stenting or bypass surgery.

EECP is also useful in patients who have complications such as kidney malfunction, severe lung diseases or other serious medical conditions, who cannot either be studied or treated with traditional methods such as balloon angioplasty or stenting or bypass surgery as they may not be able to withstand these procedures or may develop complications.

Patients also enjoy a general improvement in quality of life as the improvement noted in the heart arteries also occurs in other arteries such as those supplying the heart, brain, eyes, kidneys genitals and leg’s among others.

Thank you.

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