

William Harvey Clinical Research Centre



Barts Health Research Presentation evening

A meeting was held on Thursday 16 July 2015 at Whipps Cross Lecture Theatre.

Dr Manish Saxena gave a talk entitled 'The Rox AB Coupler, a novel intervention for Hypertension'. A summary of the talk is below.

High blood pressure is a leading cause of heart attacks and strokes. Patients at the Barts Hypertension clinic who were not well controlled on guideline based treatment were offered a novel device based treatment known as the ROX coupler. The device developed by ROX Medical and named the 'Coupler' is a paper clip sized implant which is inserted between the artery and vein in the upper thigh, in a procedure lasting around 40 minutes under local anaesthetic.

The ROX Coupler creates a passageway between an artery and a vein in the thigh. This allows blood rich in oxygen to flow from the artery into the vein which results in oxygen rich blood returning to the lungs. It also lowers the resistance of flow in the blood vessels. Lowering resistance in the blood vessels helps in lowering blood pressure. The ROX Coupler has been used in

over 250 patients so far but it is not yet routinely used for treating hypertension.

This treatment was delivered as part of a multicentre, randomised controlled trial with a cross over design. The study published in the Lancet Journal early this year compared the effects of the Coupler versus usual medical treatment in 83 patients of whom 44 received the ROX Coupler device. Patients who received the Coupler experienced a clinically significant and durable reduction in blood pressure. There were also a reduced number of hypertensive complications and hospital admissions for high blood pressure crises. However, the Coupler, like all therapies, can have side effects.

The study findings show that blood pressure treatment with the ROX Coupler can give both patients and doctors an alternative option for treating high blood pressure in the future – particularly when standard therapies have failed.

