

High blood pressure treatment has major breakthrough

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Researchers from the University of Glasgow have piloted a new technique which can dramatically reduce blood pressure in patients.

The one off procedure, which uses radiofrequency energy to target the [renal artery](#), is an entirely new approach to treating the condition and has produced results which show dramatic improvements in the condition of patients.

The study showed that, after six months, patients treated in the study experienced significant reduction in blood pressure than those treated with standard methods.

The Glasgow element of the study was led by Professor Alan Jardine, from the Institute of Cardiovascular and Medical Sciences.

He said: “This really is an incredibly promising study and the results really are groundbreaking. It is the most exciting development in this field for many years.

“Before being involved in the trial the patient I treated was on eight different forms of medication for her high blood pressure. Now she is on none at all and has been free of medication for two months.

“Although this is still early in the process, the results could pave the way for an entirely new method of treatment.”

Patients treated in the study experienced a 33mmHg greater reduction in blood pressure at six months than those treated with standard methods. The results of the study have been published in *The Lancet*.

The new procedure, similar to angioplasty, uses a catheter inserted into the upper thigh and then fed up to the renal artery at the kidney. The procedure selectively silences the renal nerves using radio frequency energy.

By accessing and disabling these nerves, the over activity of which is associated with hypertension, the procedure aims to lower blood-pressure.

The treatment is minimally invasive and does not involve a permanent implant, allowing patients to recover quickly and soon return to their normal lives.

The worldwide research was led by Professor Murray Esler, associate director of the Baker IDI Heart and Diabetes Institute of Melbourne, Australia.

He said: “The impressive results of this study show that this approach has the potential to become a truly revolutionary treatment.

“Combined with findings from an earlier study, which demonstrated the safety and durability of the therapy, these results fuel our enthusiasm for the potential of this treatment to significantly impact the standard of care for the large number of patients suffering from this disease.”

Though it has no symptoms, [high blood pressure](#) is the number one risk factor for premature death worldwide, affecting about one in three adults. Nearly half of Europeans suffer from hypertension and in the United States, approximately 75 million people are affected, only two-

thirds of whom are treated.

Of those receiving treatment, approximately half are not achieving target blood pressure levels. The medications often prescribed for hypertension must be taken daily for the duration of a patient's life, can be costly, and often result in side effects that can negatively impact quality of life. Globally, the estimated annual healthcare expenditure directly related to hypertension is approximately £310billion.

The catheter device – known as the Symplicity Catheter System - was produced by Ardian, who also funded the study.

The Symplicity HTN-2 trial was an international, multi-centre, prospective, randomized, controlled study of the safety and effectiveness of renal denervation in patients with uncontrolled hypertension.

One hundred and six patients were enrolled from 24 investigational sites. At baseline the randomized treatment and control patients had similar high blood pressures – 178 over 97 and 178 over 98 respectively, despite both receiving an average daily regimen of five antihypertensive medications.

After 6 months, the average blood pressure of the renal denervation group was reduced by -32/-12, compared with no change in [blood pressure](#) for the control group.

Provided by University of Glasgow

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