

## Solutions beyond drug treatment

HYPERTENSION can be a silent killer. Most people are unaware of the problem because they may have no warning signs or symptoms. It's a primary risk factor for cardiovascular disease, as well as stroke, heart attack, heart and kidney failure, damage to vision and aneurysm. Other less severe conditions associated with hypertension are headaches, neck discomfort, tiredness and regular bouts of giddiness.

Also known as high blood pressure, hypertension basically means that the individual has blood pressure (BP) that consistently measures above normal (BP reading of more than 140/90 mmHg).

Keeping blood pressure under control is vital for maintaining your health and reducing the risk of dangerous conditions. It is for this very reason that it is essential that blood pressure is measured regularly especially if you are high risk.

Risk factors that make patients more susceptible to hypertension include:

- Being more than 60 years of age
- Having family members or a family history of high blood pressure
- Being overweight
- Smoking and drinking alcohol
- Consuming too much salt in the diet
- Consuming a high-fat diet
- Constantly experiencing high stress levels
- Having a sedentary lifestyle
- Having existing health conditions such as cardiovascular disease, diabetes, chronic kidney disease and high cholesterol levels.

### Battling the uncontrollable

In a recent study published August of last year titled *Prevalence, awareness and control of hypertension in Malaysia from 1980-2018: A systematic review and meta-analysis*, the results

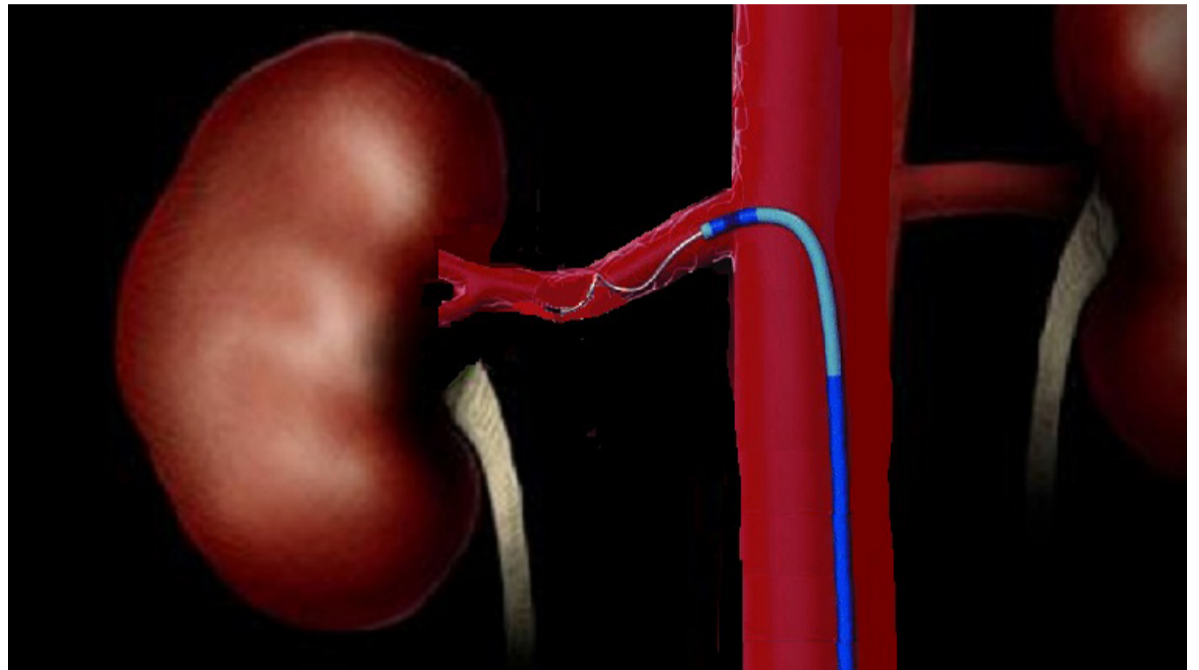


Dr Choy Chun Ngok.

concluded that three in 10 adults aged 18 years or above have hypertension, while four in 10 adults aged 30 years or above have it. The study continues to elaborate that five out of 10 people are aware of their pre-existing hypertension condition and only a third of those who undergo treatment manage to control their hypertension. With such low numbers of success among those undergoing treatment, what hope is there for those who are unable to keep their blood pressure in check?

Despite taking the usual recommended measures, there are still patients who are having trouble in reducing their blood pressure levels. Consultant cardiologist at Subang Jaya Medical Centre (SJMC) Datuk Dr Yap Lok Bin shares that with the help of modern technology, there is an option available – renal denervation.

An emerging and promising new therapy for severe and resistant hypertension, renal denervation is a minimally invasive procedure. Renal denervation is a catheter-based radiofrequency ablation of the afferent and efferent sympathetic nerves within the wall of the renal arteries. Basically, it is a form of therapy that involves



Renal denervation is a simple and safe procedure involving a catheter tube inserted to the blood vessels near the kidneys to administer radio waves to blast the nerves. This results in reduced overactivity of the nerves and can significantly reduce high blood pressure in patients with severe hypertension.

'blasting' nerves in the kidneys with radio waves.

Renal denervation is performed by inserting a catheter tube into the blood vessels near the kidneys and guided using X-ray imaging, high frequency signals are delivered to zap overactive nerves. This process leads to the reduction in nerve signals and hormones (factors that cause high blood pressure) which in turn leads to a permanent effect causing arteries to relax and consequently lowering blood pressure. The procedure is performed while the patient is under anaesthetic and usually takes around an hour.

"It is the first alternative treatment for patients who have been unable to control severe high blood pressure using conventional medication," says Dr Yap. He provides the example of patients who still have hypertension despite being on three or more drugs prescribed by medical specialists.

He adds, "These patients are also usually the ones with overactive nerves. The renal denervation procedure allows doctors to gain access to the overactive nerves and fire short bursts of radio waves in the hopes of bringing blood pressure down, nearer to normal level."

Dr Choy Chun Ngok, another consultant cardiologist at SJMC, contributes, "For many years, cardiologists have been relying on drugs in treating high blood pressure. Although drugs have been successful in treating high blood pressure, there are some cases where drugs alone are inadequate."

He goes on to explain that renal denervation technology has been reinvented and updated many times over the years and the latest catheter has been showing very promising results.

Dr Yap chimes in, explaining that hypertension and high blood pressure is a very common problem and that research in this

field needs to be continuously carried out. It is, after all, with continuous research that led to the creation of renal denervation.

"Generally, hypertension was regarded as being due to stiffness of the arteries as people get older. However, extensive research has found the nerves driving the stiffness of the arteries that would lead to severe hypertension are concentrated around the blood vessels near the kidneys. This was where forward-thinking doctors and scientists found that the renal denervation procedure helped to effectively treat severe cases of hypertension."

### New hope for alternative treatment

"Since the medical field now has an alternative option for such patients, it really opens up new opportunities in treating high blood pressure, especially when the traditional method of using medication is inadequate," says Dr Choy. Most importantly, the procedure carries a low risk and is safe and simple for doctors to carry out.

Both Dr Yap and Dr Choy believe patients are open to considering this treatment option, particularly when they have experienced persistent hypertension despite being on many medications.

As the technology and treatment is still relatively new in Malaysia, there is a lack of awareness among patients and there is also very limited information on the matter. Therefore, Dr Yap and Dr Choy believe there is great importance to explain the effectiveness of the procedure and alleviate any fears patients may have. Taking the time to discuss the steps of the treatment will also help in negating any misconceptions that may arise.

According to them, many established hospitals in the US and Europe, as well as countries such



Datuk Dr Yap Lok Bin.

as Japan, Korea and Taiwan have already been performing this treatment with their patients on a national scale. It is hoped more Malaysian patients will gradually become aware of the procedure as the technology is increasingly used. Dr Choy notes, however, that not everyone is eligible for the treatment as it would depend on their medical history.

The main possible reasons for non-eligibility include normalisation of blood pressure after treatment adjustment, unsuitable renal arterial anatomy and previously undetected secondary causes of hypertension.

Dr Yap and Dr Choy both share the goal of creating awareness regarding renal denervation. Their hopes are that patients welcome this new opportunity as this is a solution to help those with severe and resistant hypertension. "While curing the condition so people no longer need any drugs is still probably a dream, there is at least a device that is moving forward beyond just drugs as a treatment for severe and resistant hypertension," says Dr Yap.

■ For more information, call 03-5639 1212.

### Other treatments for hypertension

For most people, a change in lifestyle is usually the first step to help control and manage high blood pressure. Some changes your doctor may recommend include:

- Eating a heart healthy diet that contains less salt and fat
- Exercising regularly
- Losing weight if you are overweight or obese/ maintaining your weight if it is at a healthy level
- Limiting your alcohol consumption
- Stop smoking

However, there are times where lifestyle changes aren't enough. If a healthy diet and exercise don't help, your doctor may recommend medication to help get your hypertension under control.



The type of medication your doctor prescribes for your hypertension depends on your blood pressure measurement and overall health. Often, two or more blood pressure drugs work better than just one, and at times, finding the most effective combination of medications is a matter of trial and error. Ask your doctor on what your blood pressure treatment should be. Note that the ideal blood pressure treatment goal can differ depending on your age and health condition.

Nevertheless, if your blood pressure remains high despite taking at least three different types of high blood pressure drugs, you may have resistant hypertension and you must consult your doctor on the next course of action.