Risk of stroke declining

In Singapore, the risk of someone suffering a stroke at any given age has declined every year since 2007.

The Ministry of Health (MOH) told Mind Your Body that the rate of strokes per 100,000 people has fallen from 175 in 2007 to 158 in 2011, after adjusting for an older population.

Today’s stroke patients are also more likely to survive a stroke, said Associate Professor Christopher Chen, the director of the Memory Ageing and Cognition Centre at the National University Health System.

In addition, the number dying from a stroke has dropped from 39 per 100,000 people in 2007 to 34 per 100,000 people in 2011, after adjusting for an older population. But it is still the fourth leading cause of death here, accounting for 9 per cent of total deaths in Singapore.

Prof Chen thinks the declining mortality rate is because of better hospital care and stroke treatment. He also believes the proportion of severe stroke cases has not increased over the years.

Dr NV Ramani, a specialist in neurology at Raffles Neuroscience Centre at Raffles Hospital, said the drop in death rates mirrors the decline in incidence rates.

Doctors say people are taking better care of themselves, which then cuts their risk of developing a stroke.

Those most at risk of a stroke are the elderly, smokers and people with high blood pressure (hypertension), high cholesterol and diabetes.

The proportion of Singapore residents aged 18 to 69 years with hypertension and high cholesterol has dropped since 1998 after adjusting for an older population.

In 1998, 32.5 per cent of Singapore residents had hypertension and 28.2 per cent had high cholesterol. In the latest National Health Survey in 2010, this had dropped to 23.5 per cent with hypertension and 17.4 per cent with high cholesterol.

The bad news is that other risk factors were not better controlled: Smoking, diabetes and obesity rates have increased in the same period.

Still, among those, hypertension is the strongest risk factor for stroke.

Associate Professor Vijay Kumar Sharma’s study of 240 acute ischaemic stroke patients at the National University Hospital (NUH), published in this year’s March issue of Jama (The Journal Of The American Medical Association) Neurology, showed that hypertension was the most prevalent risk factor (75 per cent), followed by high cholesterol (57 per cent), atrial fibrillation (35 per cent), diabetes mellitus (29 per cent) and smoking (26 per cent).

Prof Sharma, a senior consultant at the division of neurology at NUH, said hypertension puts a person at about four times higher risk of a stroke than a non-hypertensive person.

But all is not lost if the condition is well-controlled with lifestyle modifications and sometimes medication, which can reduce a hypertensive person’s risk by 40 to 50 per cent, he added.

There are two types of stroke: ischaemic and haemorrhagic.

Ischaemic strokes account for about 80 per cent of all strokes here. It occurs when a blood vessel in the brain ruptures, causing bleeding in or around the brain. This type of stroke results in more deaths than ischaemic strokes.

Associate Professor Chang Hui Meng, a senior consultant at the department of neurology at the National Neuroscience Institute in Singapore General Hospital (SGH), said hypertension plays stress on blood vessels and damages them, making them more vulnerable to atherosclerosis, the accumulation of cholesterol in the walls of arteries, which then narrows them.

Hypertension can also lead to weakening of the blood vessels in the brain, causing them to balloon and burst.

Over time, this raises the risk of a blood vessel becoming blocked or bursting, leading to ischaemic stroke and haemorrhagic stroke respectively.

Associate Professor Ivan Ng, a neurosurgeon at Mount Elizabeth Novena Hospital, said seven in 10 patients with haemorrhagic strokes have “sky high blood pressure” upon admission.

The elasticity of blood vessels is important to prevent fluctuations in blood pressure during different activities, such as when one is exerting during exercise or simply resting on the bed, he said. But these vessels can stiffen as a result of hypertension, ageing, cholesterol deposits and harmful substances from smoking.

Doctors say that better preventive treatment, including medication to reduce high cholesterol and hypertension, has helped bring down the rate at which Singaporeans are getting strokes.

Besides primary prevention, doctors are also concerned about preventing further strokes.

Prof Chang said a patient’s risk of having another stroke is 10 per cent in the first year following a stroke, with the risk highest in the first month.

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