

Doc Talk

How dementia and hearing loss are linked

Studies have shown that patients with hearing loss may be two to five times more likely to develop dementia, depending on the severity of their hearing problems



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After the circuit breaker ended on June 1, more patients have come forward to seek help for their hearing loss.

Seeking early treatment for hearing loss is advantageous as it gets more challenging to adapt to hearing aids the longer one has lived with untreated hearing loss.

Earlier this year, an elderly gentleman came to see me. He was accompanied by his son, who asked: "Doctor, can you persuade my dad to wear a hearing aid? He has dementia and it is getting harder to look after him as he also cannot hear."

Upon checking his father's medical records, I realised the senior had consulted us 15 years ago, when he already had significant hearing loss, but was cognitively intact.

Like many patients, he had refused to wear a hearing aid.

The patient's son explained that he had already bought two pairs of hearing aids in the past 18 months, but that his father simply refuses to wear them.

I patiently explained to him the immense challenges in trying to get patients who have dementia to start wearing a hearing aid for the

first time. This is because cognitive reserves are needed for patients to adapt to their new hearing aids.

I was then asked if there is any link between dementia and hearing loss.

A 2011 study by Johns Hopkins University in the United States had monitored more than 600 adults over 12 years; and identified hearing loss as an important risk factor of dementia.

After factoring in other risks, patients with hearing loss were two to five times more likely to develop dementia, depending on the severity of their hearing problem.

Other studies, including one from Singapore, also arrived at a similar conclusion.

There are three theories that might be able to explain the link between hearing loss and dementia.

First, certain diseases (for example, those that cause the narrowing of blood vessels) can accelerate both cognitive decline and hearing loss.

Second, the increased cognitive resources diverted towards understanding what one is hearing can result in less cognitive reserves being available for memory and other mental functions.

Last, hearing loss results in social isolation, which is a risk factor of dementia.

A comprehensive review of dementia research published in *The Lancet* (among the highest-ranked academic medical journals) in 2017 identified hearing loss as the second most important modifiable risk factor of dementia.



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The first being early childhood education.

Hearing loss can usually be treated once diagnosed. However, one will not be able to travel back in time to improve one's early childhood education.

This study estimated that 25 per cent of dementia cases might be prevented from treating hearing loss.

When the son heard that, he confessed to having hearing loss himself. He is in his 50s and asked if he could prevent dementia in the future by wearing a hearing aid now.

Unfortunately, there is a lack of

quality research to provide a definitive answer to this question, likely due to ethical considerations.

Such randomised clinical trials would entail "flipping a coin" for a large number of people with hearing loss to either receive or not to receive hearing aids over an extended period while monitoring for the onset of dementia.

I reassured him that should he develop dementia later on, he could still hear well if he starts using a hearing aid now.

The World Health Organisation (WHO) has classified dementia as a major public health problem that has a profound impact on our lives.

Globally, the number of people with dementia will triple to 150 million by 2050; with the economic burden to society rising to US\$2 trillion (S\$2.73 trillion) by 2030.

Today, one in 10 Singaporeans over the age of 60 has dementia. Singapore is ageing fast.

By 2050, half its population will be above 65 years old, with an estimated 250,000 people with dementia living in the community.

The WHO also recognised that hearing loss is a major public health concern, with 5 per cent of the current global population suffering from hearing loss that is severe

enough to cause disability.

By 2050, one in 10 people, or 900 million, will have disabling hearing loss. Indeed, the 2017 Global Burden of Disease study has identified hearing loss as the third leading cause of disability worldwide.

The 2010 Singapore National Health Survey found that 3 per cent of the country's adult population have disabling hearing loss. This rises rapidly to 10 per cent for those aged 60 to 69.

Yet, overall, only 3 per cent of Singaporeans with disabling hearing loss use hearing aids. Further studies also confirmed that they would wait until their hearing loss is advanced before seeking help.

As Singapore rides the Silver Tsunami, it is important to prevent and manage dementia and hearing loss.

The focus of healthcare is shifting towards healthy life expectancy, away from life expectancy alone.

Early diagnosis and treatment of hearing loss can help preserve our social, communication and mental functions, and help transform our silver years into golden ones.

Hearing loss is not only harder to treat in someone who already has dementia, but is also a significant risk factor of dementia.

It is always best to get help early.

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