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Doctor Mention:

Dr David Lau



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New procedure allows patients to recover voice within 10 minutes

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SINGAPORE: Patients who have lost their voice box through disease, such as throat cancer, may be able to speak within minutes after a procedure to [create](#) a small opening at the throat.

They could speak within 10 minutes, compared to a two-week recovery period after the procedure.

The National University of Singapore (NUS), which announced the new device on Monday, said the one-step [system](#) also promises to save cost and reduce discomfort.

It is developed through an Engineering-in-Medicine project led by Dr Chui Chee Kiong, of the Mechanical Engineering Department of NUS, and Dr David Lau, Consultant Ear, Nose & Throat Surgeon at Raffles Hospital.

People who lose their voice box can recover about 80 percent of normal speech by having a voice prosthesis fitted into an opening or fistula between the trachea (windpipe) and oesophagus (food pipe).

To speak, the patient covers the stoma (breathing opening in the neck) with his or her thumb and forces air through the prosthesis into the oesophagus and out through the mouth.

Before the prosthesis can be inserted, the doctor needs to make a small puncture in the wall between the trachea and oesophagus.

During the puncture, a guide-wire is inserted into the fistula to prevent the creation of false passages.

Two "dilators" are inserted to widen the fistula.

Previously, a temporary rubber tube is placed into the fistula and the voice prosthesis is not inserted until about two weeks later, when the fistula is "mature".

The new device changes this -- by merging all the steps into a single procedure.

It ensures an immediate snug fit of the prosthesis in the passageway created between the trachea and the oesophagus, compared to the current procedure which can take some trial and error to achieve good sizing of the prosthesis.

The system has been successfully tested on animals and is now ready for clinical human trial.

"Patients requiring voice restoration after surgery for laryngeal cancer have to make multiple visits to the clinic, and I had often thought how a simple, one step solution would save them time, discomfort and [money](#). So we decided to go out and design that solution," said Dr Lau.

"The system we designed has several advantages over existing methods as it not only reduces the [number](#) of steps and complexity, but also increases accuracy of placement and safety, and allows for immediate voicing.

"However, patients will still need to put in some effort, and work with the speech therapist to get the best voicing results."

- CNA/lp



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