

Bronchoscopy restores teen's 'thin' airway

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Calcutta: An 18-year-old college student whose airway narrowed after prolonged ventilation has been treated through a minimally invasive bronchoscopic procedure, avoiding conventional surgery.

According to critical care doctors, patients who remain on prolonged ventilation with a tube inserted for more than seven to 10 days can sometimes develop airway narrowing.

The young man from Mizoram suffered an episode of herpes zoster encephalitis, an infection of the brain, in 2025 and had to be put on ventilation in Mizoram.

"During ventilation, there

is a tube that goes inside to facilitate the machine, and under the pressure, the upper part of the airway was injured. An injury like this is not unheard of for patients on prolonged ventilation," said Angshuman Mukherjee, senior consultant and pulmonary medicine specialist at Manipal Hospital Mukundapur.

The man subsequently developed progressive breathing difficulties that began affecting his everyday life.

Doctors at the pulmonology department of Manipal Hospitals Mukundapur said he was given the option of surgery, but that could have required another episode of ventilation support and a stay in the ICU, which the family was not prepared for.



The boy's illness had earlier been complicated by aspiration pneumonia. Over time, he developed shortness of breath and stridor, a harsh, high-pitched sound caused by narrowing of the upper airway.

A CT scan of the thorax confirmed post-intubation stenosis, with an evaluation showing nearly 70 per cent narrowing of the airway across multiple layers, an official of Manipal Hospital

Mukundapur said.

In early September, doctors at Manipal Hospital Mukundapur accessed the narrowed airway through a bronchoscope.

"Using an electrocautery knife, the stenotic layers were precisely cut open, following which the entire narrowed segment was dilated using a balloon. The procedure resulted in minimal blood loss," Mukherjee said.

A check bronchoscopy performed the next day showed that the airway remained well dilated, allowing the patient to be discharged the same day.

Doctors said that while ventilation is often essential in the treatment of critically ill patients, post-intubation stenosis is one of its

potential complications.

"We therefore try to remove all patients from ventilation as soon as possible. While ventilation does good to a patient who cannot breathe, prolonged ventilation with a tube inside might result in the post-intubation stenosis phenomenon," Mukherjee said.

Amitabha Saha, director of critical care medicine at Desun Hospital, said tracheal stenosis after endotracheal intubation has been reported in India.

"These are complications that present sometimes weeks or months after ventilation (endotracheal tube) is removed. But this requires more nursing care, by which such incidents can be prevented," Saha said.