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## Safe method of tracheal extubation after tracheal reconstruction

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To the editor: A gum elastic bougie is commonly used in the United Kingdom, as an aid for difficult intubation [1], but in Japan the efficacy of the bougie has not been widely recognized. I report a patient with tracheal stenosis in whom a gum elastic bougie was used safely to aid tracheal extubation after operation.

A 53-year-old man was scheduled for resection of an acquired subglottic tracheal stenosis that occurred after tracheostomy 5 years previously. General anesthesia was induced with halothane under spontaneous respiration. Once the patency of the airway was confirmed, 50 mg succinylcholine was given. Rigid laryngoscopy indicated that it was

possible to insert a tracheal tube of 6–7 mm inside diameter. To facilitate intubation of a 7.0 mm reinforced tracheal tube, a 15F gum elastic bougie (Eschmann, Hythe, UK) was inserted into the trachea. The tube was then passed over the bougie into the trachea without resistance.

The stenotic region was resected and the trachea reconstructed. At the end of the operation, the chin was fixed to the chest by sutures to prevent neck extension, which could cause disruption of the anastomosis. After the operation the lungs were ventilated while propofol and atracurium were given. The next morning attempts were made to wear the patient from the ventilator. After recovery from sedation, 4ml of 2% lidocaine was injected into the trachea through the tracheal tube. Because difficulty with reintubation was suspected, a gum elastic bougie was passed through the tracheal tube into the trachea before tracheal extubation. The trachea was then extubated over the bougie. There was no sign of airway obstruction. The presence of the bougie did not cause coughing. The patient even could speak, which suggested that the function of the vocal cords had recovered. The bougie was therefore removed. The patient recovered uneventfully.

In patients who undergo tracheal reconstruction, reintubation might be required owing to collapse of the airway [2] or dysfunction of the vocal cords [3]. In addition, it would be difficult to reintubate the trachea because of the full flexion of the neck. Insertion of a bougie before tracheal extubation facilitates possible reintubation of the trachea.

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