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IMAGES IN ANESTHESIA

Post-extubation upper airway obstruction: an interesting case

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A 42-yr-old man was admitted to hospital for emergent coronary angioplasty. The patient's trachea was intubated prior to catheterization and a trial tracheal extubation was attempted four days into his admission; however, the patient was promptly reintubated with a subglottic secretion drainage endotracheal tube after developing severe epistaxis. He had no documented stridor at that time. Nine days into his admission, the patient's trachea was extubated successfully, and he was transferred to the ward where he experienced a progressive voice change. On day 12, he developed sudden onset stridor and required heliox to maintain oxygenation. He was started on corticosteroids and empiric antibiotics and was admitted to the intensive care unit. The otolaryngologist was consulted to perform fibreoptic laryngoscopy, the results of which revealed normal vocal cords. The patient was sent for computed tomography (CT) (Fig. 1), and those results showed a casting of debris within the upper trachea (a craniocaudal dimension of 27 mm) that narrowed the tracheal airway to 5 mm in diameter. The patient then underwent rigid bronchoscopy. He was sedated initially with sevoflurane for laryngoscopy and then sedated further with fentanyl and ketamine and paralyzed with succinylcholine. A rigid bronchoscope was introduced just above the obstructing lesion. At this point, jet ventilation was inadequate to maintain oxygenation; therefore, the bronchoscope was

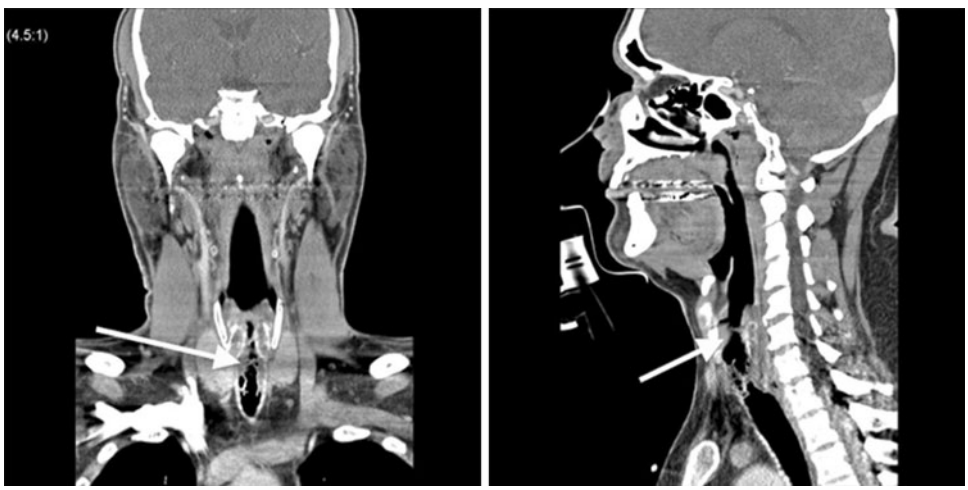

Fig. 1 Head and neck computed tomography. The *arrow* is showing the area of obstruction

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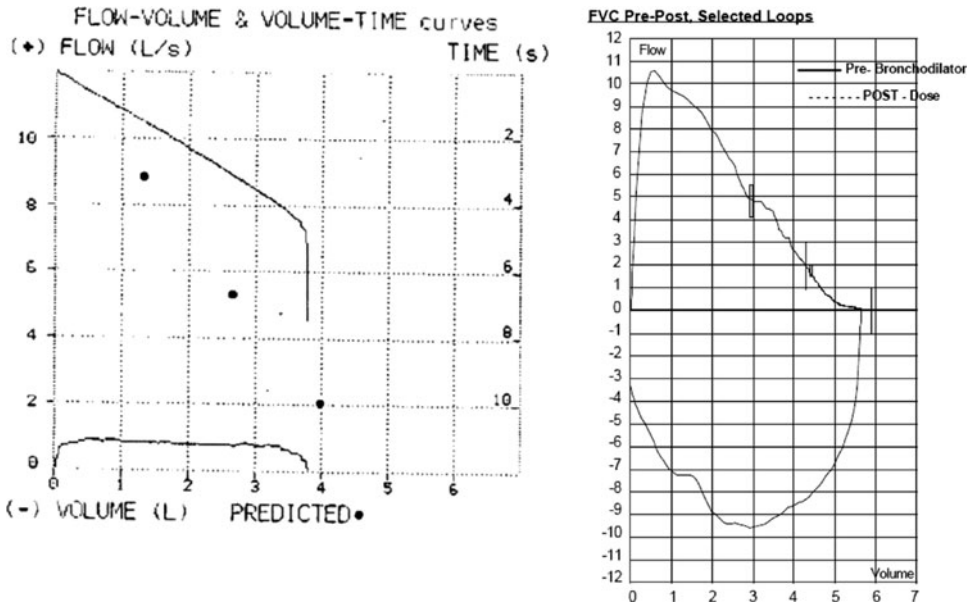

Fig. 2 Pulmonary function tests. On the left: Pulmonary function tests before mass removal. On the right: Pulmonary function tests after mass removal

advanced beyond the lesion to mid-trachea where effective ventilation was then possible. The lesion, described as granulation tissue, was debrided until the airway was clear. Pulmonary function tests (Fig. 2) completed prior to removal of the mass showed a fixed extrathoracic obstruction that resolved after removing the mass. The pathology report confirmed the presence of an inflammatory cell exudate. The fungal stain and smear for mycobacteria were negative, and only a few grams of positive cocci were identified on the gram stain. We hypothesize that the subglottic mass was a mucous casting of subglottic secretions possibly desiccated by the continuous suction port.

Conflict of interest The authors have no conflict of interest or financial disclosure. The images have not been previously published, and the computed tomography scan images were obtained with the help of the radiology department at the Toronto General Hospital. The images of the pulmonary function tests were scanned from the patient's chart.