Tracheal Flap after Percutaneous Dilatational Tracheotomy

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A 66-YR-OLD male patient developed expiratory stridor shortly after decannulation. Bronchoscopy showed, at the stoma site, a large flap (fig. A and B, arrows) that moved synchronously with the respiratory cycle and obstructed more than 80% of the lumen during expiration (fig. B). The reinsertion of the tracheotomy tube trapped the flap between the tube itself and the anterior tracheal wall, and allowed airway patency to be reestablished and maintained. The flap was coagulated with argon-plasma and mechanically resected during rigid bronchoscopy under general anesthesia with spontaneous-assisted ventilation.

The incidence of granulomas and other posttracheotomy obstructive lesions ranges from 1.5% to 56%, depending on the criteria for examination (surveillance vs. obstructive symptoms).1–3 Unlike cicatricial stenosis, granulomas and flaps can be effectively removed during rigid bronchoscopy after coagulation with laser or argon-plasma.2

General anesthesia with adequate muscle relaxation before intubation with the rigid scope is regarded as essential to avoid airway injury, and spontaneous-assisted or jet ventilation are the preferred methods to limit the risk of hypoxia and hypercapnia.

For suprastomal obstructing lesions, the maintenance of the tracheostomy tube until the treatment is performed assures an unobstructed airway and offers a safe way to ventilate the patient during induction of general anesthesia.

Even though not fail-safe, bronchoscopy performed before decannulation can help detect any tracheotomy-associated obstructive complication, especially if the tracheotomy tube is withdrawn as far out of the trachea as possible without losing the airway, to allow the examiner complete airway inspection.3

References