

Rigid bronchoscopic stenting in a patient of tracheobronchial gout - perioperative anesthetic concerns

Sir,

Gout has been reported to involve the joints and connective tissue but airway involvement has not been much reported.^[1] We present a case with airway lesions which compromised airway lumen and caused respiratory distress.

A 58-year-old hypertensive male with gout and tophaceous deposits for 35 years was scheduled for rigid bronchoscopy, tracheobronchial biopsy, and stenting [Figure 1]. His investigations were within normal limits except elevated serum uric acid (8.9 mg/dL). He had received antitubercular treatment for pulmonary tuberculosis 4 years ago. The patient had developed cough, shortness of breath, and stridor 10 months back and required repeated bronchoscopic dilatation. Endobronchial biopsy shows hyperplastic stratified squamous epithelium. Computed tomography of chest revealed diffuse irregular circumferential wall thickening of trachea, stenosis of carina and right main bronchus, and right lung hyperinflation [Figure 2]. Flexible bronchoscopy revealed anteroposterior narrowing of distal trachea, extensive bulge of right tracheal wall and multiple nodules on tracheal wall and carina extending into left main bronchus. Four months ago, patient developed subcutaneous emphysema after a bout of cough which required emergency tracheostomy.

At present, the patient had stridor, respiratory rate of 29 breaths/min, and bilateral wheeze. He was hemodynamically stable and had oxygen saturation (SpO₂) of 91%. He was administered nebulized budesonide and salbutamol. After initiating routine monitoring and preoxygenation via the tracheostomy tube, anesthesia was induced with 80 mg of propofol and 100 µg of fentanyl. Four mg of vecuronium was administered after confirming manual ventilation. Tracheostomy tube was removed after instilling 3 ml of 1% lignocaine, and rigid bronchoscope was introduced orally. Anesthesia was maintained with intravenous infusion of 150 µg/kg/min of propofol. Lungs were manually ventilated through the side port of the bronchoscope with 100% oxygen. Bronchoscopy revealed multiple nodules on tracheal wall, carina, and left main bronchus. After endobronchial biopsy, a 6 cm long ultraflex metallic covered Y stent (Boston Scientific,



Figure 1: Hand joint deformity

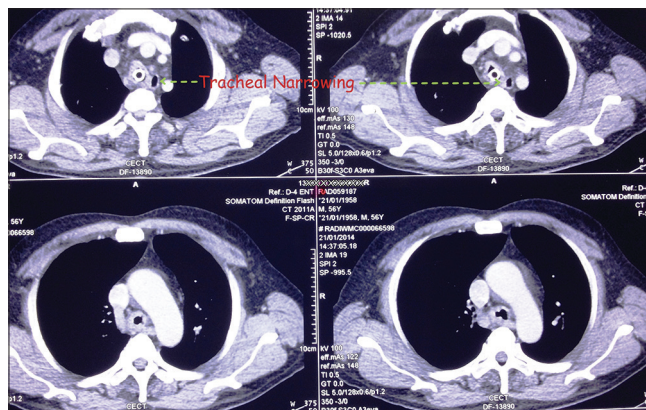


Figure 2: Computed tomography scan shows trachea narrowing

Marlborough, MA 0175 USA) was placed in lower trachea and carina. SpO₂ was 94–97% and airway pressure 30–40 cm of H₂O during the procedure which lasted for 35 min. At the end of the procedure, the tracheostomy tube was reinserted and neuromuscular blockade reversed. There was no stridor and the patient was shifted to postanesthesia care unit.

Tophi of gout in trachea can erode cricoid and tracheal cartilage leading to tracheomalacia. Gout crystals can burst intraluminally and may cause foreign body granuloma and acute respiratory compromise.^[1] This may also lead to scarring and tracheal stenosis. Tubercles formed in submucosal layer of airway can lead to ulceration and necrosis which may result in stenosis.^[2] In our patient, the chronic gout superimposed over tuberculosis was the cause of tracheal narrowing.^[3] The patient required repeated dilation which carries the risk of rupture, which happened in our patient after a bout of cough. Tracheal rupture can also occur during positive pressure ventilation which may result in tension pneumothorax. Intraluminal tophi may also cause rupture of tracheal tube cuff.

The patients with gout may have airway manifestations in addition to the systemic involvement. This requires adequate airway assessment, proper planning, and great vigilance during airway interventions.

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Conflicts of interest

There are no conflicts of interest.

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