

Rotational Collapse of Trachea after Percutaneous Dilatational Tracheostomy

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This article describes a patient whose trachea became obstructed during head rotation after Percutaneous Dilatational Tracheostomy (PDT). A 26 year-old female was admitted into the Intensive Care Unit (ICU) because of relapse of Myasthenia Gravis (MG). During the therapy, the patient underwent PDT. During her ICU stay, the patient experienced sepsis. After two months, she complained of suffering from dyspnea and occasionally showed stridor and signs of obstruction. These signs occurred during the rotation of her head. Bronchoscopy and multi-slice CT scan imaging were carried out and no airway pathology or obstruction and other signs of MG relapse were observed. Pulmonary Function Tests were normal, but the patient complained from dyspnea during rotation of the head which improved immediately after rotating head to normal position. Repositioning of tracheostomy tube did not improve the symptoms.

The general opinion is that it may be a complication of PDT that refers to irritation of the posterior wall of the trachea secondary to the chronic irritation by the tracheostomy canula, which causes an intermittent obstruction of the trachea, and Polderman suggested

the acronym TWISTED (tracheal wall injury with intermittent stoppage of the tracheostomy and episodes of dyspnea).¹ This problem was termed as the Rotational Collapse of trachea, because the signs of airway obstruction were completely improved with normal positioning of the head. In PDT, the airway was manipulated, therefore, patient selection, technique of procedure and the skill of intensivist play an essential role in perioperative complications. Thus currently, with the routine use of PDT in ICUs, new complications are reported and it is crucial to know the ways to manage such problems.

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References

1. Laos LF. Percutaneous dilatational tracheostomy: we live in a twisted world. Chest 2003 May;123(5):1336-1338.