Balloon Dilatation for Tracheal Stenosis After Prolonged Intubation: a Case Report

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Introduction:

Tracheal stenosis following prolonged intubation is a relatively rare but serious problem since it interferes normal breathing. There are various treatment modalities that can be perfomed as a single procedure and/or combined. Although balloon dilatation is effective and relatively easy to perform, still there were not many cases reporting successful treatment of balloon dilatation monotherapy in tracheal stenosis.

Case Illustrations:

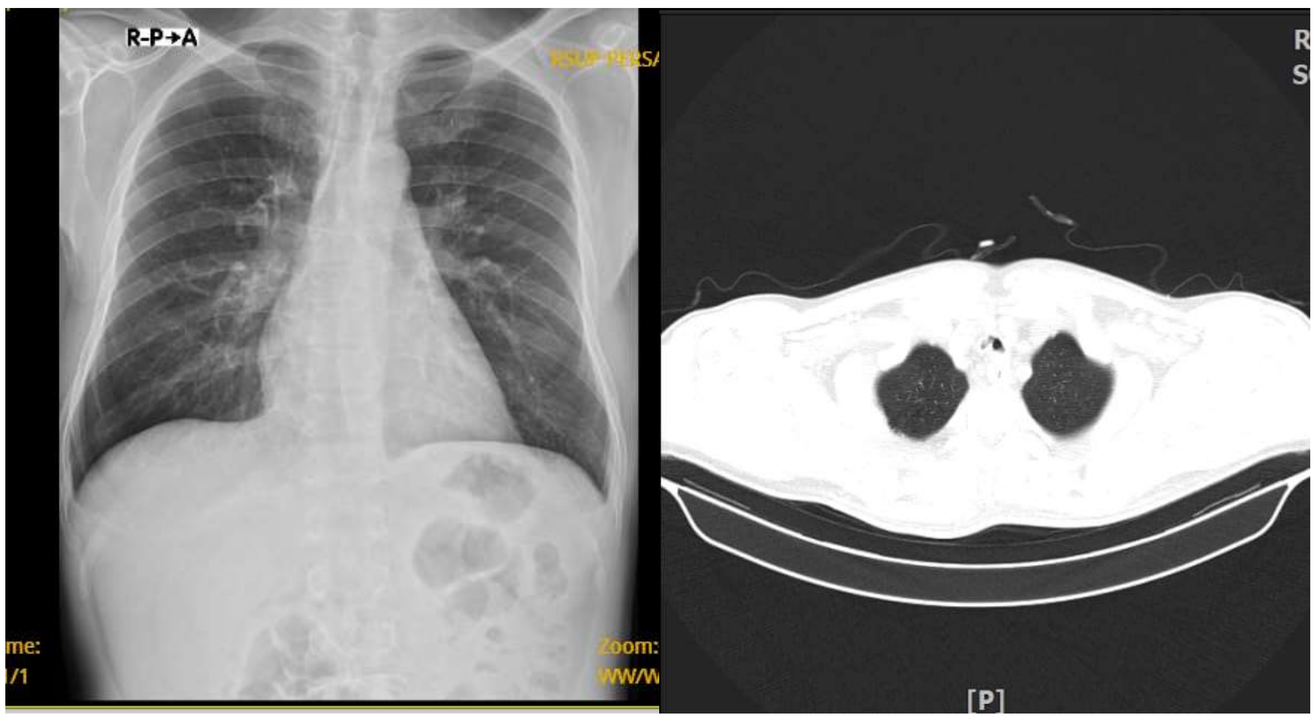
We reported a 43-years-old-man with dyspnea for two months. He previously intubated for 7 days due to Road Traffic Accident. He came to our emergency department with stridor and hypoxemia. A chest computed tomography scan showed pathological narrowing of trachea. Flexible bronchoscopy using therapeutic scope revealed proximal trachea stenosis with 0.5 cm lumen diameter, the lenght of stenosis is around 4 cm, and 1.5 cm from vocal cord. The balloon dilatation using balloon number 12 then performed and the diameter of trachea increased 1.5 cm, symptoms relieved.

Discussion:

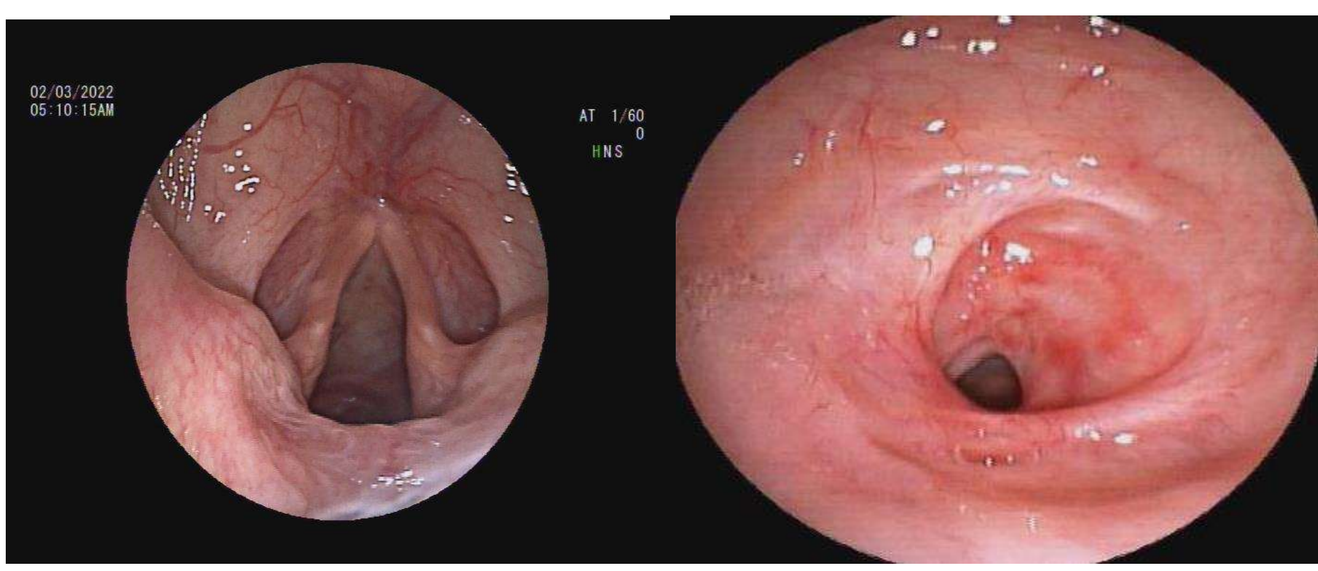
Tracheal balloon dilatation is initiated to enlarged the diameter of the airway. Tracheal stenosis could occurs after 7-19 days of intubation. The mechanism of balloon dilatation is to create some cracks at the stenotic site. Balloon dilatation is an easy and effective way to relieve tracheal stenosis and can be repeated several times. Excessive balloon inflation may cause rupture of the airway leading to hemorrhage, pneumothorax, pneumomediastinum or mediastinitis. But, overall good outcome can be achieved.

Conclusions:

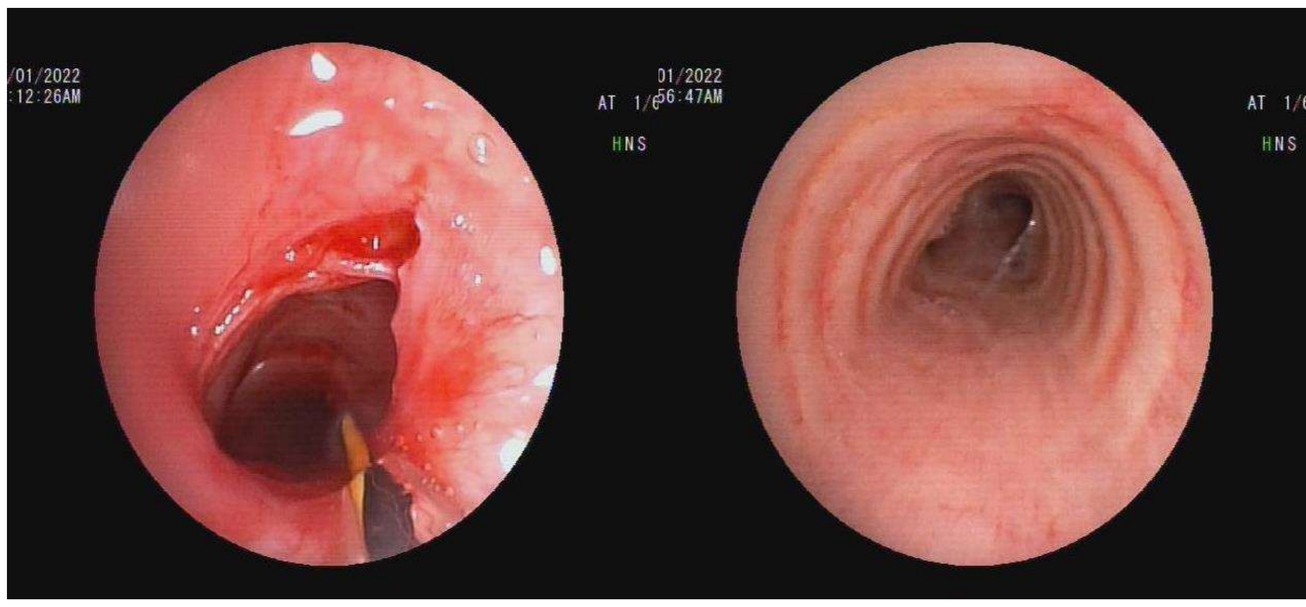
Balloon dilatation is a simple, safe, promising and effective method that offers immediate symptomatic relief for tracheal stenosis with a history of prolonged intubation. However, balloon dilatation is considered as a temporary measure, and most of the cases still need definitive or additional treatment either resection or stent placement.



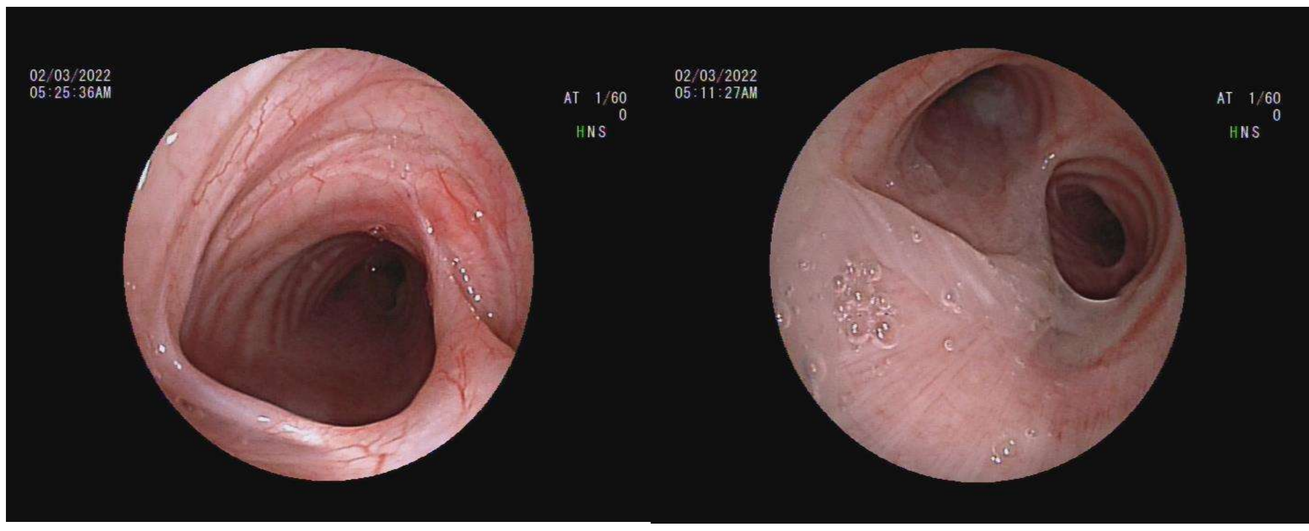
A. Tracheal stenosis



B. Before balloon dilatation



C. After balloon dilatation



D. A month after dilatation

References:

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Hanaoka Jun, et al. Respir Med Case Rep. 2019:28:100917
David Shitrit, et al. Eur J Cardiothorac Surg. 38 (2010) 198—202