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Additional Abstracts

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TRACHEOESOPHAGEAL FISTULA: A RARE COMPLICATION OF PROLONGED INTUBATION IN COVID-19

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INTRODUCTION: Tracheoesophageal fistula (TEF) is a rare condition that can be congenital or acquired. Patients of the novel Corona Virus Disease 2019 (COVID-19) remain intubated for prolonged periods that can give rise to a multitude of complications. Here we present a case of a 53-year-old female who got intubated after developing COVID pneumonitis, complicated by acute respiratory distress syndrome (ARDS). She developed TEF at the end of the third week of intubation.

CASE PRESENTATION: A 53-year-old female presented to the hospital with hypoxemic respiratory failure caused by COVID pneumonitis. She got intubated and her hospital course was complicated by ARDS. She got extubated by the end of the third week but reintubated for persistent hypoxemia two days later. She was on the pressure control mode of ventilation with positive end-expiratory pressure (PEEP) of 16, Inspiratory Pressure (Pi) of 19 and peak pressure of 35. Suddenly, she developed hypoxemia and gastric distension on the same ventilator settings and her peak pressure dropped to 22. The X-ray of the abdomen was normal. Sudden dropping of peak pressure prompted the clinician to get computerized tomography (CT) scan of the neck which revealed trachea-esophageal fistula. (Figure 1,2,3). She was treated with tocilizumab, Flolan, and broad-spectrum antibiotics. The fistula was bypassed temporarily with a tracheostomy tube and a plan was made to follow up with the surgery team for possible surgical intervention.

DISCUSSION: COVID-19 patients who develop severe respiratory disease remain on mechanical ventilation for a prolonged time period. In addition to the lack of specific guidelines to treat this disease, the severity of illness, heavy sedation, and significantly long time period of intubation add to poor outcomes in these patients. Complications of prolonged intubation include ventilator-dependent respiratory failure, ulceration, granulation tissue formation, tracheal or laryngeal stenosis, and rarely tracheoesophageal fistula to name a few. [1] The sudden deterioration of respiratory status, dropping peak pressures, and gastric distension are a few signs of fistulous opening in the trachea. The commonest site of TEF is at the bifurcation of the trachea. [2] These patients should be extubated as early as their respiratory status allows but should not be delayed for more than two weeks to avoid these complications.

CONCLUSIONS: Patients with severe COVID-19 disease remained intubated for a prolonged period. Tracheostomy tube placement should not be delayed or they can develop multiple complications. If a patient develops sudden desaturation, gastric distension, or drops peak pressures without changing the baseline ventilator settings, TEF should always be in the differentials, and management should proceed with either immediate surgical intervention or supportive care temporarily and surgical intervention later in course

Reference #1: Surgery and perioperative management for post-intubation tracheoesophageal fistula: case series analysis. Puma F, Vannucci J, Santoprete S, Urbani M, Cagini L, Andolfi M, Potenza R, Daddi NJ Thorac Dis. 2017 Feb; 9(2):278-286.

Reference #2: Moersch HJ, Tinney WS. A fistula between the esophagus and the tracheobronchial tree. Medical Clinics of North America. 1944 Jan 1;28(4):1001-7.

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