

TRACHEAL COMPLICATIONS OF PROLONGED MECHANICAL VENTILATION DURING THE COVID19 PANDEMIC: A SINGLE CENTER EXPERIENCE

S. Badovinac^a, G. Glodic^a, F. Popovic^a, D. Baricevic^a, M. Samarzija^a

^a University Hospital Centre Zagreb, Zagreb, CROATIA
contact e-mail: glodic.goran@gmail.com

Background: Tracheal complications of mechanical ventilation (MV) include postintubation (PITS) and post tracheostomy (PTTS) tracheal stenosis and tracheoesophageal (TE) fistulas. Risk factors for these complications include prolonged MV, reintubation and poor endotracheal tube cuff management, all of which were common in severe COVID19 patients during the pandemic.

Methods: we conducted a retrospective review of all patients referred to our bronchoscopy unit for endoscopic evaluation of PITS, PTTS or TE fistulas complicating MV for COVID19 from March 2021 to March 2022.

Results: A total of 21 of patients were evaluated during the study period with a mean age of 60.3 years. Reintubation after MV weaning and tracheostomy were required in 14.3% and 38.1% of patients, respectively.

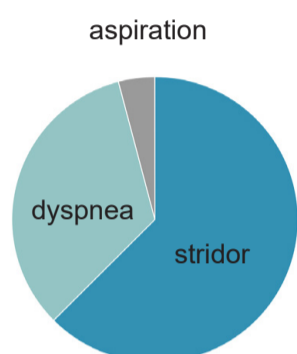


Figure 1. Patients presented with stridor (71.4%), dyspnea (38.1%) or aspiration (4.7%)

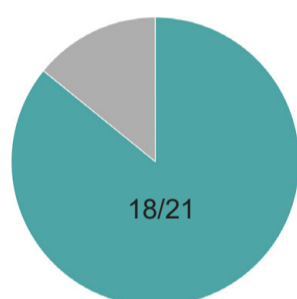


Figure 2. The increase of referrals was mostly due to a cluster of patients treated in a single ICU (18/21).

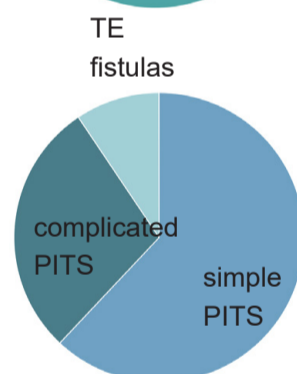


Figure 3. Simple PITS was found in 62% of cases with a mean diameter of 5.54 ± 1.6 mm, complicated PITS in 28.6% and TE fistulas in 9.4% of patients.

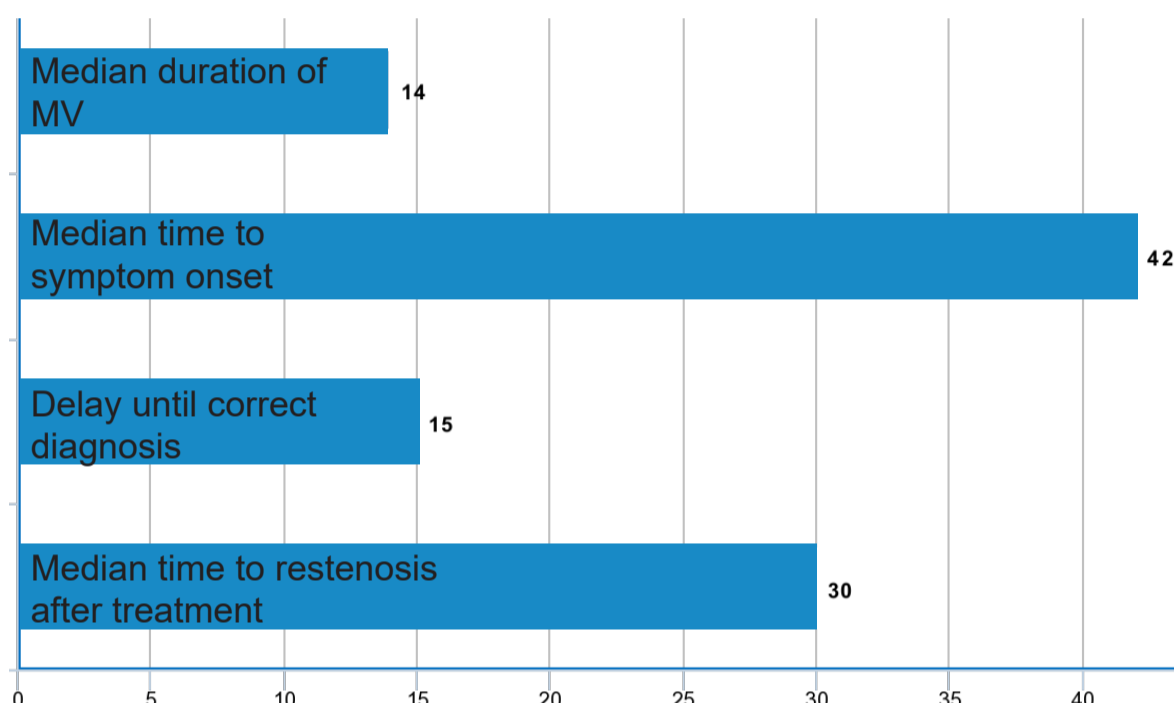


Figure 4. The median duration of MV was 14 (9.75-19.5) days. Patients presented with stridor (71.4%), dyspnea (38.1%) or aspiration (4.7%) after a median of 42 (19.5-60) days after extubation with a further delay of 15 (3-42) days until final diagnosis. Restenosis after treatment was observed in 76.9 % of patients after a median of 30 (22.5-49) days.

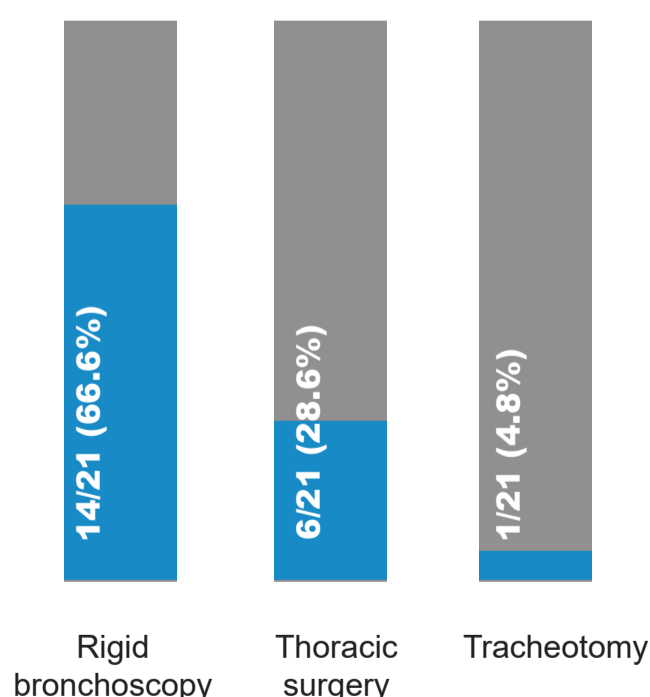


Figure 5. Initial treatment strategy in PITS after COVID19

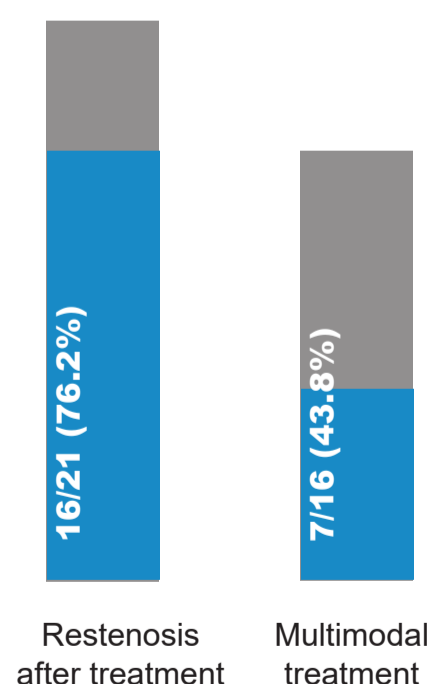


Figure 6. Restenosis after treatment was observed in 16 (76.2%) of patients. Seven patients (43.8%) required a change in treatment strategy and multimodal treatment after restenosis.

Conclusions: We experienced an increase in referrals to our bronchoscopy unit at a tertiary teaching hospital during the study period with a cluster of patients from a single ICU. The high rate of restenosis emphasizes the importance of multidisciplinary management as well as the prevention of tracheal complications with high quality ICU care during the COVID19 pandemic.