Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

CHEST Annual Meeting | October 18-21 2020

Procedures

SESSION TITLE: Procedures Posters
SESSION TYPE: Original Investigation Posters
PRESENTED ON: October 18-21, 2020

TRACHEOSTOMY AND COVID-19 ARDS: ONE ACADEMIC CENTER'S EXPERIENCE

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PURPOSE: To evaluate the practice of creation of tracheostomies during the initial phases of the COVID-19 pandemic, with a focus on clinical outcomes and sedation parameters.

METHODS: We enrolled 45 consecutive COVID-19 positive adult patients whom a consult for tracheostomy was placed at Johns Hopkins Hospital between 4/16/2020 and 5/22/2020. A total of 38 tracheostomies were performed at the time of censoring. Five of the patients were extubated before performance of tracheostomy and two were awaiting creation of tracheostomy. Data was collected via manual extraction on clinical outcomes, sedative medication use for the 48 hours pre- and 48 hours post-tracheostomy.

RESULTS: Baseline characteristics of the 45 patients include a median age of 62, BMI of 30, with an even split of Male:Female (23:22). The median days of intubation before tracheostomy was 20 (range: 5-36), median days from consult for tracheostomy to performance of tracheostomy was 3. A multidisciplinary team across specialties performed the tracheostomy consults with Interventional Pulmonary performing 18, Otolaryngology 13, General Surgery 9, Thoracic Surgery 5. 29 of the tracheostomies were performed percutaneously. A bronchoalveolar lavage, tracheal aspirate, or sputum sample was obtained on the day of performance of the tracheostomy and 35 of the 38 were negative for COVID-19. The samples were sent a median of 23.5 days after the initial positive test. Mortality on date of censoring was 7 (15.6%) including 5 (13.2%) of the patients with tracheostomy. 10 (22.2%) had been discharged including 9 (23.7%) of the patients with tracheostomy. Sedation and analgesia (total dose in 48 hours pre- (PR) and 48 hours post post-tracheostomy (PO)) expressed as median dosage for patients receiving that medication:- Dexmedetomidine (mcg/kg/hr): PR (18 patients): 28.7; PO (17 patients): 27.4- Midazolam (mg): PR (7 patients): 82.6; PO (8 patients): 55.5- Fentanyl (mcg): PR (21 patients): 450.0; PO (19 patients): 618.75- Propofol (mcg/kg/min): PR (8 patients): 1245.2; PO (5 Patients): 84.4

CONCLUSIONS: In the early-phase of the COVID-19 pandemic 38 patients with COVID-19 induced respiratory failure underwent successful tracheostomy. The median length of intubation prior to tracheostomy was 20 days, longer than our historical average, likely related to initial concerns over performing this high-risk aerosolizing procedure. The total dosage of each sedative medication decreased from the 48 hours pre- and post-tracheostomy, potentially related to endotracheal tube removal.

CLINICAL IMPLICATIONS: We were able to show that performance of tracheostomy during COVID-19 is safe and can be approached from multiple specialties. Early tracheostomy should be considered in appropriate patients to reduce cumulative sedative medication dose, length of intubation, length of ICU stay, and cost of admission.

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