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months after discharge. Average physical function and ability to participate in social role scores were low at discharge (29.7/100 and 33.6/100) but improved after 3 months (46.2/100 and 49.6/100). There was no significant deficit in cognitive function or change in satisfaction with life. Patients reported severe pain, moderate fatigue, and mild anxiety/depression that improved by 1-month post-discharge (Fig. 1).

CONCLUSIONS: Enrollment of the general trauma population in post-discharge PRO monitoring and survey completion was feasible. PRO monitoring can be useful for identifying opportunities to improve post-discharge symptom burden. Future analyses will examine associations with clinical outcomes.

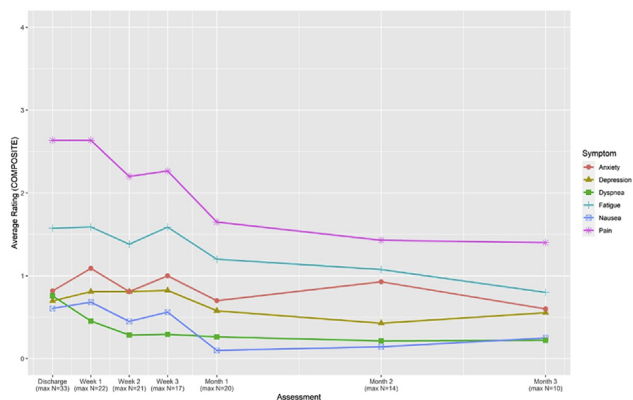


Figure 1. Post-discharge symptom trajectory following traumatic injury.

Is Resuscitative Balloon Occlusion of the Aorta Feasible in a Prehospital Setting? A Systematic Review of Literature

Linda M Gallego, Yaset Caicedo, MD, Natalia Padilla, MD, Cindy N Gallego, MD, Juan J Melendez, MD, Jose J Serna, MD, Fernando Rodriguez, MD, Michael Parra, MD, Carlos A Ordoñez Delgado, MD, FACS

Universidad Icesi, Cali, Colombia, Fundacion Valle del Lili, Cali, Colombia, Hospital Rafael Angel Calderón Guardia, San José, Costa Rica, Broward General Level I Trauma Center, Fort Lauderdale, FL

INTRODUCTION: Resuscitative balloon occlusion of the aorta (REBOA) has been successfully and safely used in the hospital management of patients with cardiac arrest or traumatic and non-traumatic hemorrhage. Recently, its earlier use has been considered in the prehospital care. This study aims to perform a systematic review regarding REBOA's implementation in the prehospital setting.

METHODS: We performed a systematic review of literature between April 2020 and July 2020. We included all type of studies, with participants of any age who required REBOA placement before admission to the emergency department, regardless of the underlying cause (traumatic or nontraumatic). Primary outcomes were feasibility and survival rates. Secondary outcomes were complications rate and the potential use of prehospital REBOA.

RESULTS: A total of 225 references were identified, of which six studies met the inclusion criteria. Three studies reported the implementation of prehospital REBOA procedures. The feasibility rate ranged between 66% and 71% and the survival rate ranged between 20% and 60%. Major and minor complications were reported, including early arterial thrombosis and amputations. All procedures were performed by physician-led emergency teams well trained in endovascular techniques. Three studies reported that around 3.2% of all trauma patients, 13.6% traumatic cardiac arrests, and 8.6% ambulance treated cardiac arrests, could benefit from prehospital REBOA.

CONCLUSIONS: Prehospital REBOA placement could be a feasible and safe intervention for a significant proportion of traumatic and nontraumatic patients. However, the REBOA implementation might require extensive operator training. Further studies are required to evaluate the feasibility of REBOA placement in limited resource scenarios.

Late Tracheostomy When New York City Was the COVID-19 Epicenter: Was it Worth the Wait?

Kiah Andrews, BA, Anna Liveris, MD, Jaylen Green, MD, Niloy J Iqbal, PhD, Tabrez Alam, BA, Dalia Alqunaibit, MBBS, Edward Chao, MBBS, FACS, Srinivas H Reddy, MBBS, FACS, Sheldon H Teperman, MD, FACS, Melvin E Stone, Jr., MD, FACS
Jacobi Medical Center, Bronx, NY
Kings County Hospital Center, New York, NY
Jacobi Medical Center, New York, NY

INTRODUCTION: During New York City's (NYC) time as the world's COVID-19 epicenter, there was unclear guidance on when to perform tracheostomy for COVID-19+ patients. We hypothesized that early tracheostomy (≤ 14 days) would demonstrate improvement in clinical outcomes over late tracheostomy.

METHODS: We conducted a retrospective chart review of all COVID+ tracheostomies performed between March 6 and June 9 2020 in patients 18 years and older at the 11 acute care hospitals comprising the NYC municipal hospital system. 30-day mortality, ICU length of stay, and 30-day decannulation were compared between early and late tracheostomy using proportional hazards regression.

RESULTS: There were 49 early (mean \pm SD 9.6 ± 3.6 days) and 154 late (mean \pm SD 26.3 ± 8.5 days) tracheostomies with total mean \pm SD age 59 ± 12 years and no difference in mean Charlson Comorbidity Index, admission Sequential Organ Failure Assessment, and median $\text{PaO}_2/\text{FiO}_2$ ratio. There was no difference in mortality or complications between groups. After adjusting for age, Charlson Comorbidity Index, Sequential Organ Failure Assessment score, $\text{PaO}_2/\text{FiO}_2$ ratio, and ICU complications, patients with late tracheostomies were 63.5% less likely to be discharged at 5 weeks and 65.1% less likely to be decannulated in a 30-day postoperative observation period.

CONCLUSIONS: This study, the largest COVID-19+ tracheostomy series to date, suggests late tracheostomy can contribute to longer hospitalizations and delayed decannulation in critically ill patients with COVID-19 without improvement in mortality.

Occult Traumatic Pneumomediastinum on CT Scan Is Not of Concern for Aerodigestive Injury



Kamil Hanna, MD, Jorge Con, MD, FACS, Shekhar Gogna, MBBS, Matthew Bronstein, MD, James K Choi, MD, Muhammad Zeeshan, MD, Ilya Shnaydman, MD, Kartik Prabhakaran, MD, FACS, Rifat Latifi, MD, FACS FICS, Peter Rhee, MD

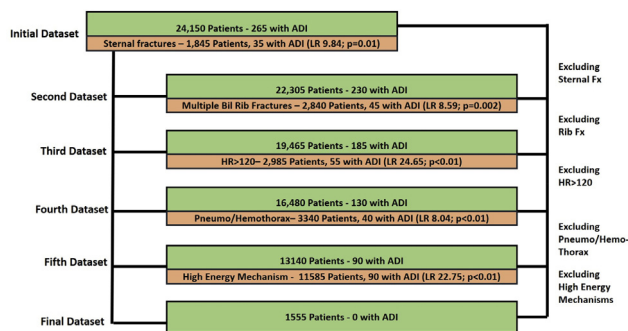
Westchester Medical Center, Valhalla, NY

INTRODUCTION: Pneumomediastinum (PM) after blunt chest trauma (BCT) is not uncommon with increased CT scanning of the chest. Often it can lead to other studies to rule out aerodigestive injury (ADI). The aim of this study was to identify variables that are high predictors of ADI and to determine when other studies are not required to rule out ADI.

METHODS: Retrospective analysis of the TQIP (2012-2016). We identified patients with BCT with PM. Regression analysis was performed to identify predictors of ADI. Recursive partitioning was performed excluding patients with each ADI predictor. In each subsequent dataset the likelihood ratio (LR) of ADI was calculated comparing patients with the next predictor vs those without it.

RESULTS: We identified 1,059,890 BCT patients. The incidence of PM was 24,150 (2.3%). Among patients with PM, mean \pm SD age was 41 ± 20 years, 72% were male, and Injury Severity Score was 17 (range 9 to 29). The overall incidence of ADI was 1.1% of the patients with PM (13% tracheal, 36% bronchial, and 51% esophageal). On regression, the predictors of ADI were high-energy mechanism (odds ratio OR 4.17; 95% CI, 1.68 to 10.32), pneumo-/hemothorax (OR 3.31; 95% CI, 2.46 to 4.45), multiple bilateral rib fractures (OR 1.38; 95% CI, 1.23 to 1.93), sternal fracture (OR 2.10; 95% CI, 1.42 to 3.13), and heart rate > 120 bpm (OR 1.75; 95% CI, 1.31 to 2.35). After patients with ADI predictors were excluded, there remained 1,555 patients with PM and none had ADI.

CONCLUSIONS: ADIs are rare in patients with PM occurring with high-energy mechanisms and concomitant severe chest trauma. Isolated or occult pneumomediastinum without severe thoracic injury might not require an ADI workup.



Patient Reported Outcomes in Trauma and the Impact of the COVID-19 Pandemic



Anna E Garcia Whitlock, MD, Justin S Hatchimonji, MD, Deborah Babalola, Katelyn Candido, Mark J Seamon, MD, FACS, Elinore J Kaufman, MD, MSHP

Department of Surgery, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA
University of Pennsylvania, Philadelphia, PA
Division of Traumatology, Emergency Surgery, and Surgical Critical Care, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA

INTRODUCTION: Preadmission mental health (MH) and quality of life (QOL) impact post-injury outcomes. COVID-19 caused widespread social and economic stress, along with increased violent injury. We hypothesized that patients injured during the pandemic would report worse MH and QOL compared with a prepandemic cohort.

METHODS: We included patients admitted to a Level I trauma center between 7/1/2019 and 8/31/2020. Demographics, injury severity, employment, alcohol use, and relationship status were collected and patients screened for post-traumatic stress disorder. Preadmission MH and QOL were assessed via in-house administration of the Patient-Reported Outcomes Measurement Information System-29 (PROMIS-29) Survey. Patients were stratified by admission before March (before) vs May to August (during). PROMIS-29 scores were compared between groups and against a general reference population (mean \pm SD 50 ± 10).

RESULTS: We included 179 before and 95 during patients. During patients were younger (41.6 vs 46.5 years; $p < 0.04$) but without difference in injury severity, employment, alcohol use, or relationship status. More during patients were injured by firearm (24.2% vs 15.6%) or motorcycle crash (11.6% vs 3.4%) and fewer by fall (24.1% vs 34.1%; $p < 0.05$); 25.3% during and 28.5% before patients screened positive for post-traumatic stress disorder