Incidence of Retained and Recurrent Hemothorax in Trauma Patients

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BACKGROUND

- Retained/Recurrent hemothorax (RH) after trauma is associated with development of an empyema, pneumonia and fibrothorax
- The incidence or retained of RH after hospital discharge has not been previously described in the literature

OBJECTIVES

- Determine the incidence of RH in multisystem trauma patients after discharge
- Identify risk factors for development of RH after discharge

METHODS

Thoracic and Splenic Trauma patients presenting to clinic between Jan 2022 – Dec 2023 **AND** received a CXR

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EMR Review

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- Comparison of D/C vs F/U CXR
  - Injury Details
  - Patient Demographics

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Comparison of patients that did and did not require a chest tube reinsert for RH

METHODS CONTINUED

- Univariate analysis comparing patients who did and did not receive a chest tube
- Logistic regression to identify risk factors for chest tube reinsertion based on clinical predictors from the literature and variables identify in the univariate analysis ($p < 0.1$)

RESULTS

Patient Demographics	Chest Tube Reinserted	No Reinsertion	p-value
Total	**12**	**351**	**-**
Male Sex, n (%)	**8 (66.7)**	**233 (66.4)**	**0.984**
Age, mean (SD)	**59 (19.1)**	**51 (20)**	**0.177**
ISS, median [IQR]	**17 [14-20.5]**	**14 [10-22]**	**0.641**
History of HF (%)	**2 (16.7)**	**6 (1.7)**	**< 0.001**
History of COPD (%)	**1 (8.3)**	**12 (3.4)**	**0.368**
Anticoagulation, n (%)	**2 (16.7)**	**18 (5.1)**	**0.085**

Factor	Odds Ratio	Confidence Interval (95%)	
		LOWER	UPPER
Age	**0.997**	**0.962**	**1.033**
Heart Failure	**7.308**	**0.754**	**70.848**
Anticoagulation	**1.710**	**0.206**	**14.195**
Effusion on Discharge CXR	**5.028**	**1.397**	**18.091**

RESULTS CONTINUED

Clinic F/U with CXR
n = 363

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Fluid on CXR
n = 75
(20.6%)

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Chest tube re-insertion
n = 12
(3.3%)

Observation
n = 63
(17.4%)

CONCLUSIONS / LIMITATIONS

- Effusion on discharge CXR was associated with a 5X increased risk of developing RH
- No patients developed any complications of RH
- Data is unique to trauma in our area (mainly blunt trauma)
- Underpowered to identify risk factors due to low number of chest tube insertions

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