

PIH in TRAUMA

Postintubation Hypotension



RESEARCH QUESTIONS



How prevalent is postintubation hypotension (PIH) in trauma patients?

Is PIH development associated with adverse outcomes in these patients?

SIGNIFICANCE



- There is evidence that PIH in critically ill patients in ED and ICU settings is associated with increased morbidity and mortality.
- It is unclear if trauma patients who develop PIH have greater morbidity and/or mortality compared with trauma patients who do not develop PIH.

METHODS



- Retrospective case series of all adult trauma patients intubated at a tertiary trauma centre in Halifax, Nova Scotia between 2000 and 2015.
- We evaluated prevalence of PIH and created a logistic regression model to determine the odds of morbidity/mortality in PIH & non-PIH groups.

Definition of PIH:

Pre-ETI hypotension: $>5\text{mmHg}$

Use of a vasopressor

MAP to $\leq 60\text{mmHg}$

SBP to $\leq 80\text{mmHg}$

Any of the above within 15 min of ETI

Endotracheal Intubation

Postintubation Period

0 Time (min) 15

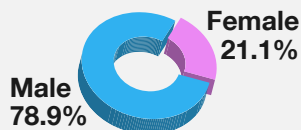
RESULTS



477 Intubated Trauma Patients

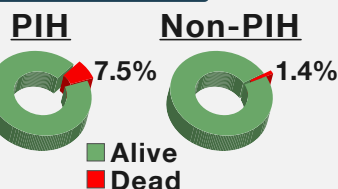
Prevalence of PIH = **36.3%**

Characteristics

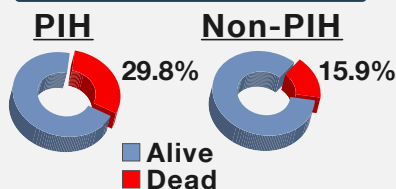


	PIH	Non-PIH
Mean Age	44.8	39.0
ISS ≥ 12	84.8%	75.4%

ED Mortality



In-Hospital Mortality



Odds: PIH & Mortality

Variable = PIH (Reference = Non-PIH)

ED Mortality

OR 3.45 (95% CI 1.42 - 8.36), $p = 0.006$

In-Hospital Mortality

OR 1.83 (95% CI 1.01 - 3.31), $p = 0.047$

TAKE HOME MESSAGE



- In our study of major trauma patients requiring endotracheal intubation, development of PIH was common and associated with increased mortality.
- These findings suggest that there may be potentially important patient safety issues related to the practice of ETI in critically ill trauma patients.