

# Identification of factors associated with postoperative hemorrhage in Stanford type A aortic dissection repair

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# Disclosure

- No disclosures



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# Postoperative hemorrhage after repair of Stanford type A aortic dissection

- One of the leading causes of mortality and reoperation following Stanford type A aortic dissection (TAAD) repair.
- Factors associated with postoperative hemorrhage after repair of TAAD remain unclear.
- Study aim: to provide a comprehensive assessment of the preoperative factors for hemorrhage after surgical repair of TAAD.
- National Inpatient Sample (NIS)
  - largest all-payer inpatient care database in the United States.



# Methods- National Inpatient Sample database

- **National Inpatient Sample (NIS) database last quarter of 2015-2020:**
  - 4,282 Patients who underwent TAAD repair.
  - 3,302 (77.11%) incidences of hemorrhage.
- **Multivariable logistic regression was employed to select preoperative variables that were either predictive or protective of post-operative hemorrhage in TAAD.**
- **Multicollinearity tests were examined to confirm independency for the selected factors.**



# Results: Preoperative risk factors for hemorrhage

- **Thrombocytopenia (aOR 3.090,  $p < 0.01$ )**
- **Depression (aOR 1.560,  $p < 0.01$ )**
- **Renal malperfusion (aOR 1.543,  $p < 0.01$ )**
- **Transferred from different acute care hospital (aOR 1.285,  $p < 0.01$ ).**



# Results: Protective factors for hemorrhage following TAAD repair

- White race (aOR 0.787,  $p < 0.01$ )
- Elective surgery (aOR 0.768,  $p = 0.02$ )
- Age < 45 years old (aOR 0.729,  $p < 0.01$ )
- Drug abuse (aOR 0.669,  $p = 0.02$ )
- Coronary malperfusion (aOR 0.591,  $p < 0.01$ )



# Conclusions: Factors associated with postoperative hemorrhage after TAAD repair

- Factors associated with increased postoperative hemorrhage support pre-emptive platelet and blood product transfusion or pharmacologic treatment after TAAD repair in these instances.
- Factors that were shown to be protective are somewhat counterintuitive and may point to directions for future research.

