

# Effect of Preinjury Use of Antiplatelet Agents in Patients with Isolated Traumatic Brain Injury

Danielle Cheeseman MD  
*Lehigh Valley Health Network*

David Milia MD  
*Lehigh Valley Health Network*

David Kashmer MD  
*Lehigh Valley Health Network*

Farheen Hussain MS  
*Lehigh Valley Health Network*

John J. Hong MD  
*Lehigh Valley Health Network, john\_j.hong@lvhn.org*

*See next page for additional authors*

Follow this and additional works at: <https://scholarlyworks.lvhn.org/surgery>

 Part of the [Other Medical Specialties Commons](#), [Surgery Commons](#), and the [Trauma Commons](#)

---

## Published In/Presented At

Cheeseman, D., Milia, D., Kashmer, D., Hussain, F., Hong, J., & Barraco, R. (2011). *Effect of preinjury use of antiplatelet agents in patients with isolated traumatic brain injury*. Poster presented at: Lehigh Valley Hospital, Allentown, PA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact [LibraryServices@lvhn.org](mailto:LibraryServices@lvhn.org).

---

**Authors**

Danielle Cheeseman MD, David Milia MD, David Kashmer MD, Farheen Hussain MS, John J. Hong MD, and Robert D. Barraco MD

# Effect of Preinjury Use of Antiplatelet Agents in Patients with Isolated Traumatic Brain Injury

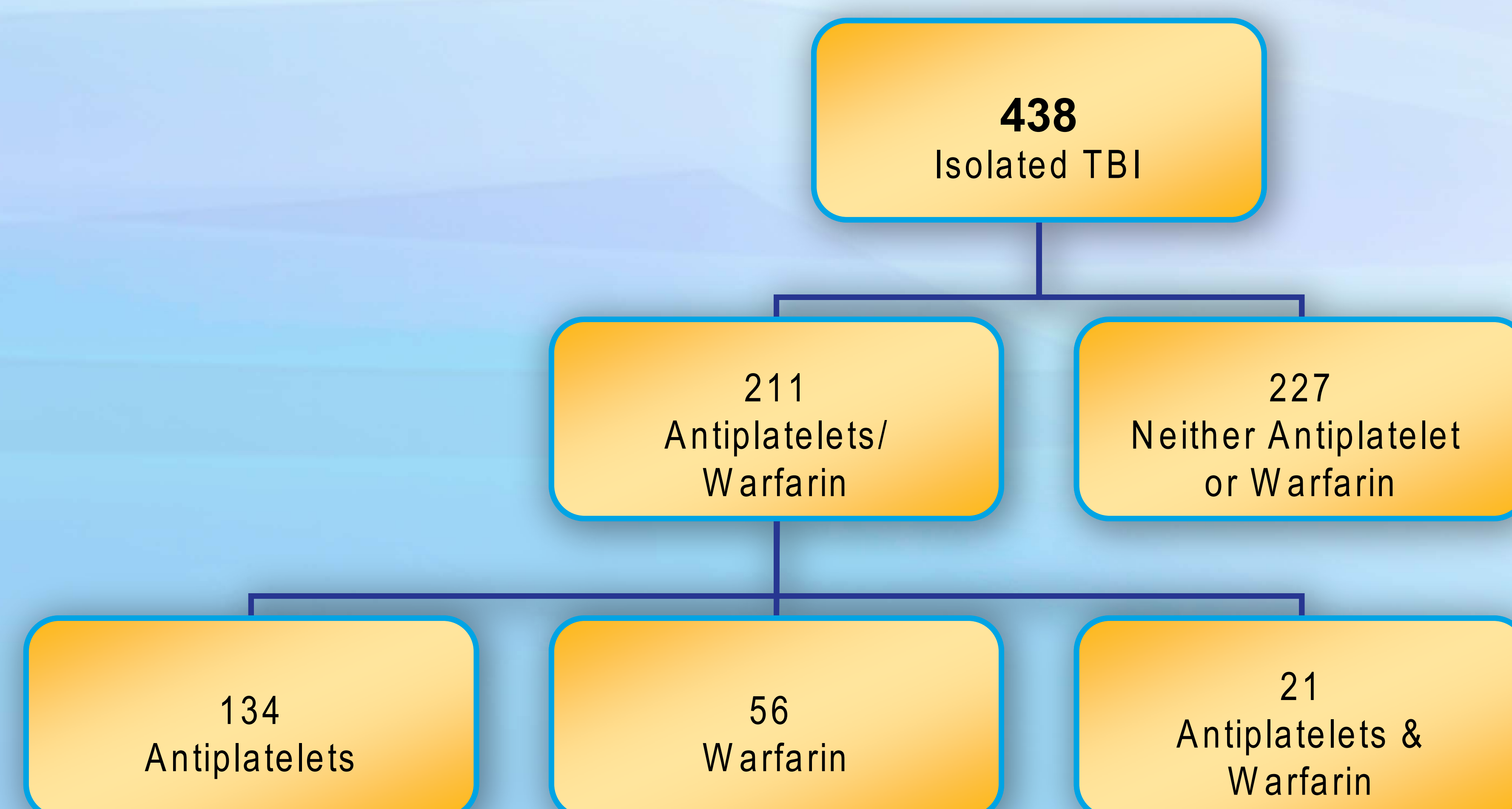
Danielle Cheeseman MD, David Milia MD, David Kashmer MD, Farheen Hussain MS, John Hong MD, Robert Barraco MD. Division of Trauma and Critical Care  
Lehigh Valley Health Network, Allentown, Pennsylvania and Medical College of Wisconsin, Milwaukee, Wisconsin

## Background

The incidence of traumatic brain injury (TBI) has remained constant over the past decade, but the use of antiplatelet (AP) agents has steadily increased, particularly in the elderly population. An increasing number of patients admitted with isolated TBI are on AP therapy at the time of trauma. Few studies have examined the effects of preinjury AP use on outcome following isolated TBI.

## Methods

A retrospective review of our institutional trauma database was conducted from January 2007 to June 2008. All patients admitted with the diagnosis of isolated TBI were evaluated. Data on demographics, admission GCS, in-hospital GCS, ISS, head AIS, platelet count, PT, PTT, INR, use and type of antiplatelet or anticoagulation medication, progression of TBI, need for neurosurgical intervention, in-hospital mortality, discharge disposition, and readmission within 30 days were collected. A multiple regression analysis was performed.



## Results

- 438 patients with isolated TBI, 48% taking AP or warfarin.
- No significant difference in mortality between AP & Neither groups.

Clinical Characteristic	AP Only	Warfarin Only	AP & Warfarin	Neither
Age (years)	76.1	77.1	78.3	56.1
Gender	Male 67	Male 29	Male 15	Male 140
	Female 58	Female 27	Female 6	Female 87

Clinical Characteristic	AP	Neither	P
Intubated on Admission	3	27	0.001
Progression on TBI	15	20	NS
Need for Surgical Intervention	27	31	NS
Mortality	9	26	NS
Platelet Transfusion	10	9	NS
Readmission within 30 days	25	16	0.001

Platelet Transfusion	Yes	No	P
INR	1.27	1.14	NS
Platelets	195	256	0.02
GCS	11.7	13.3	NS
AIS	4.5	4	0.01
LOS	4	3	NS
ICU LOS	2	1	0.01
Progression of TBI	6	29	0.001
Need for Surgical Intervention	8	50	0.001
Mortality	5	30	0.01
Antiplatelet Use	10	124	NS

## Conclusions

- A large number of patients with isolated TBI take AP agents or warfarin prior to injury.
- Patients with isolated TBI on AP agents or warfarin are older than TBI patients not taking AP or warfarin.
- Patients who received platelet transfusions have worse outcomes compared to those who did not.