An industry view

Clive Meanwell MD PhD

Disclosures

- Labeling
- Financial

Prologue

"Pristine groins"

John A. Bittl. Personal communication

TREATMENT WITH BIVALIRUDIN (HIRULOG) AS COMPARED WITH HEPARIN DURING CORONARY ANGIOPLASTY FOR UNSTABLE OR POSTINFARCTION ANGINA

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Table 3. Bleeding Complications for All Treated Patients Accord- ing to Treatment Group.*								
Complication	BIVALIRUDIN	Heparin	Odds Ratio (95% CI) P Value					
Entire cohort								
No. of patients	2161	2151						
no. of patients (%)								
Intracranial hemorrhage Retroperitoneal bleeding Red-cell transfusion Major hemorrhage	1 (0.05) 4 (0.2) 80 (3.7) 82 (3.8)	2 (0.09) 14 (0.7) 186 (8.6) 210 (9.8)	0.5 (0.0-5.5) 0.3 (0.1-0.9) 0.4 (0.3-0.6) 0.4 (0.3-0.5)	0.62 0.02 <0.001 <0.001				
Patients with post- infarction angina								
No. of patients	366	369						
no. of patients (%)								
Intracranial hemorrhage Retroperitoneal bleeding Red-cell transfusion Major hemorrhage	0 1 (0.3) 11 (3.0) 11 (3.0)	1 (0.3) 1 (0.3) 35 (9.5) 41 (11.1)	0.3 (0.0-8.3) 1.0 (0.1-16.1) 0.3 (0.2-0.6) 0.3 (0.1-0.5)	1.00 1.00 <0.001 <0.001				

JACC: CARDIOVASCULAR INTERVENTIONS

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Antithrombotic Strategy in Non–ST-Segment Elevation Myocardial Infarction Patients Undergoing Percutaneous Coronary Intervention

Insights From the ACTION (Acute Coronary Treatment and Intervention Outcomes Network) Registry

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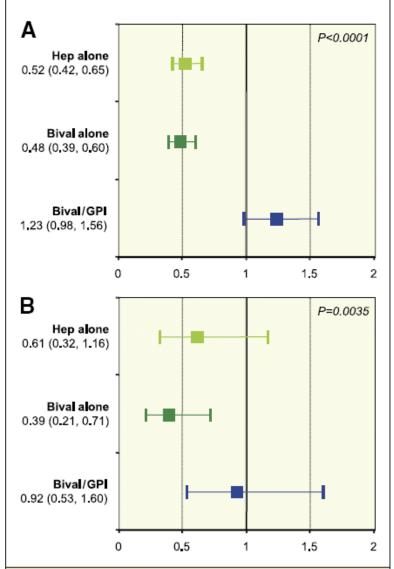


Figure 2. Adjusted Odds Ratio for Major Bleeding and In-Hospital Mortality by Antithrombotic Strategy

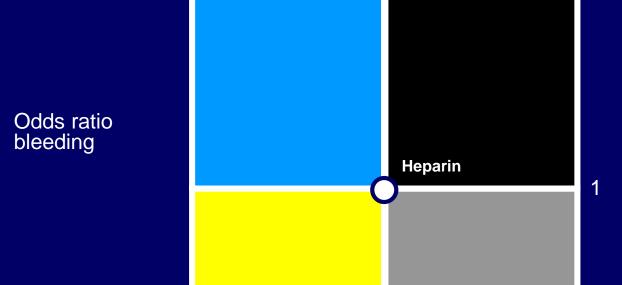
Adjusted odds ratio (95% confidence interval) for (A) major bleeding and (B) in-hospital mortality by antithrombotic strategy. The reference group is Hep/GPI. Abbreviations as in Figure 1.

Topics

- 1. Framework
- 2. Associations
- 3. Sources
- 4. Approaches
- 5. Observations

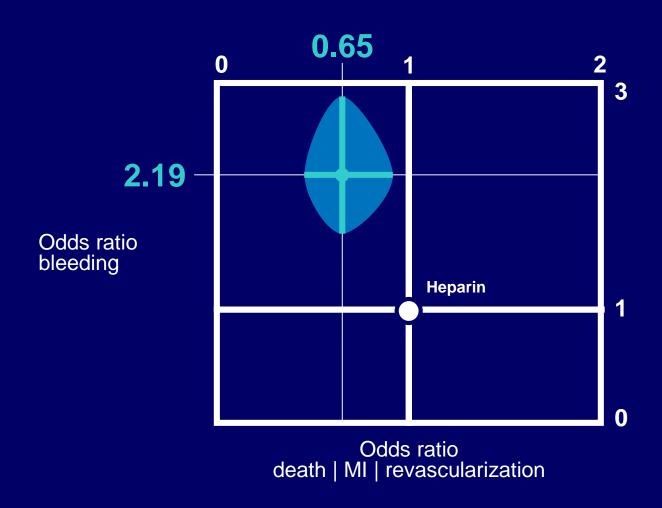
1. Framework

0

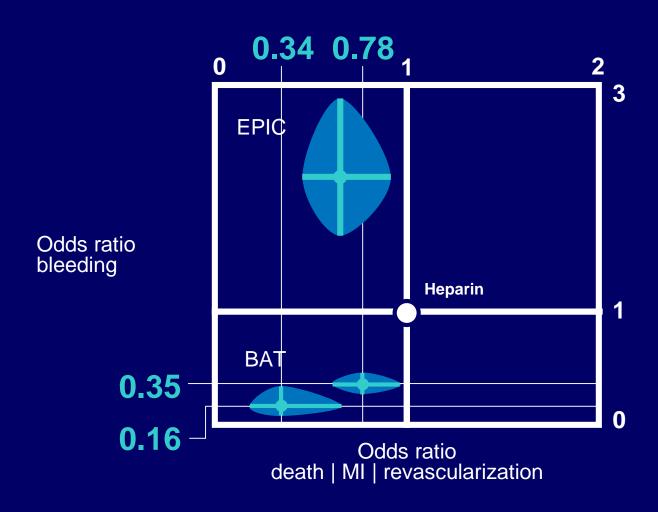


Odds ratio death | MI | revascularization

1. Framework

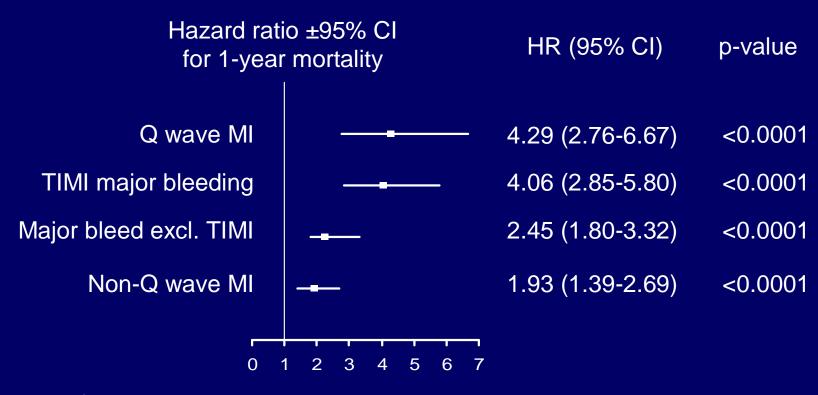


1. Framework



2. Associations

Several outcome events associate with 1-year mortality



Cox model adjusted for baseline predictors, with time-updated covariates ACUITY Trial: N = 13,819

3. Sources

 Access site and non-access site bleeds both influenced by antithrombotic treatment

Endpoint ¹	Heparin + GPIIb/IIIa	Bivalirudin + GPIIb/IIIa	Bivalirudin alone
	n=4603	n=4604	n=4612
Non-access site bleeding	5.4%	5.7%	3.9%
Access site bleeding	18.4%	18.0%	10.2%

^{1.} Includes ACUITY major + minor bleeding, excluding CABG related bleeds

4. Approaches

Access route does not appear to impact organ bleeds

	Heparin + GPIIb/IIIa	Bivalirudin + GPIIb/IIIa	Bivalirudin alone
	n=4603	n=4604	n=4612
All patients	7.9%	7.8%	4.2%
Radial access (n=826)	7.4%	9.7%	4.7%
Femoral access (n=11,988)	7.3%	7.1%	4.1%

Includes ACUITY major + minor bleeding, excluding CABG related bleeds: Intracranial, intraocular, GI tract, genitourinary, pulmonary, ENT & pericardial)

5. Observations: what counts...

- We don't know why all this happens
- Patient experience counts
- The finance department counts

Summary

- 1. Choice of drugs or of access approach should consider both potential ischemic and bleeding impact
- 2. Both are associated with long-term mortality
- 3. Drug choice impacts access and non-access site bleeds
- 4. Access choice does not appear to impact organ bleeds
- 5. Patient experience and costs count