Major Bleeding in Acute Coronary Syndrome patients

A decade long perspective

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Disclosures

- None

Methods

- Study population: ACSIS 2000-2010

- Definitions

  - Early surveys: 2000-2004   Late surveys: 2006-2010

  - Major bleeding

    - Decrease of > 5g/dl in Hb

    - A decrease of >15% in Ht

    - Requirement for 2 units of pack cell's transfusion

    - Intracranial or retro-peritoneal bleeding

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Baseline characteristics

Characteristics	Major Bleeding (n = 142)	No major bleeding (n=11,358)	p value
Age (mean), yrs	70 ±12	64 ±13	<0.001
Women	44%	23%	<0.001
Hypertension	67%	56%	0.01
Dyslipidemia	61%	61%	0.97
Current smokers (%)	22%	36%)	≤0.001
Diabetes	42%	34%)	0.044
Chronic renal failure	25%	10%)	≤0.001
Anticoagulant tx.	9%	3%	0.001
Aspirin tx.	48%	47%	0.813

Predictors of major bleeding

Variable	Adjusted OR	95% CI	p value
Primary PCI	1.62	1.03, 2.54	0.037
Female sex	2.32	1.60, 3.37	<0.001
Age (per 10-year increase)	1.44	1.20, 1.72	<0.001
Systolic blood pressure (per 10 mmHg decrease)	1.10	1.03, 1.16	0.002
Killip class	1.23	1.00, 1.52	0.048
Chronic renal failure	2.21	1.43, 3.42	<0.001
Glycoprotein IIb/IIIa	1.66	1.05, 2.61	0.031
Aspirin	0.31	0.18, 0.52	<0.001

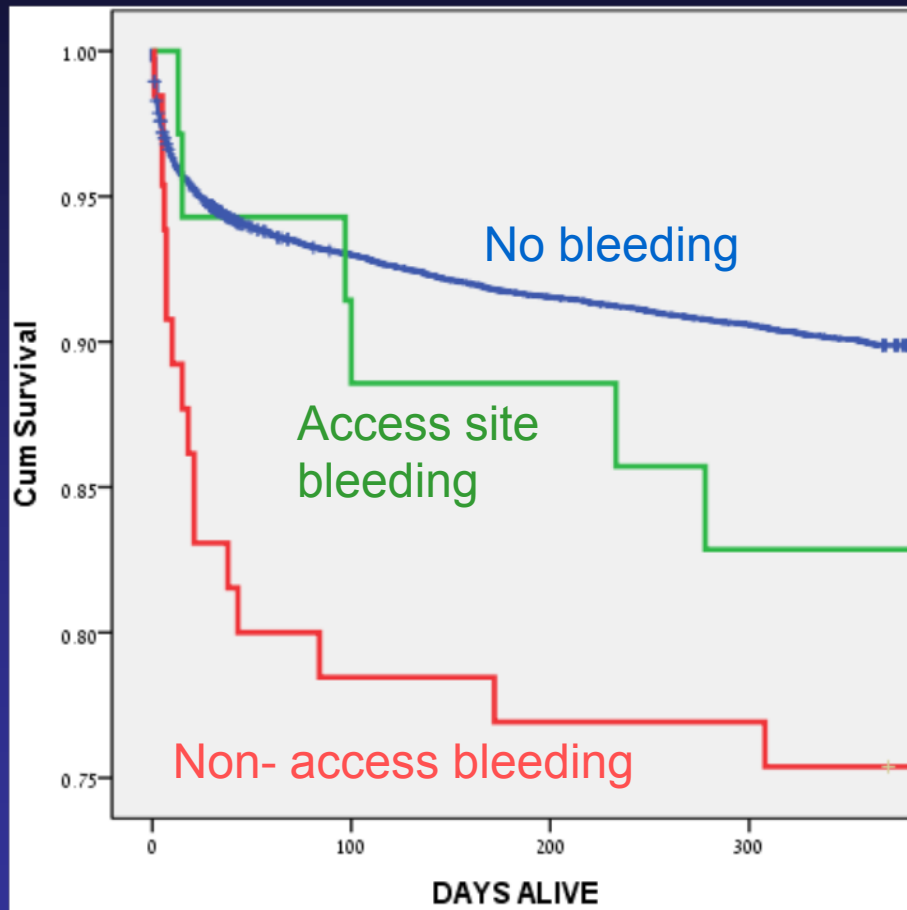# Major bleeding in STEMI

Primary PCI — Thrombolysis — Major Bleeding

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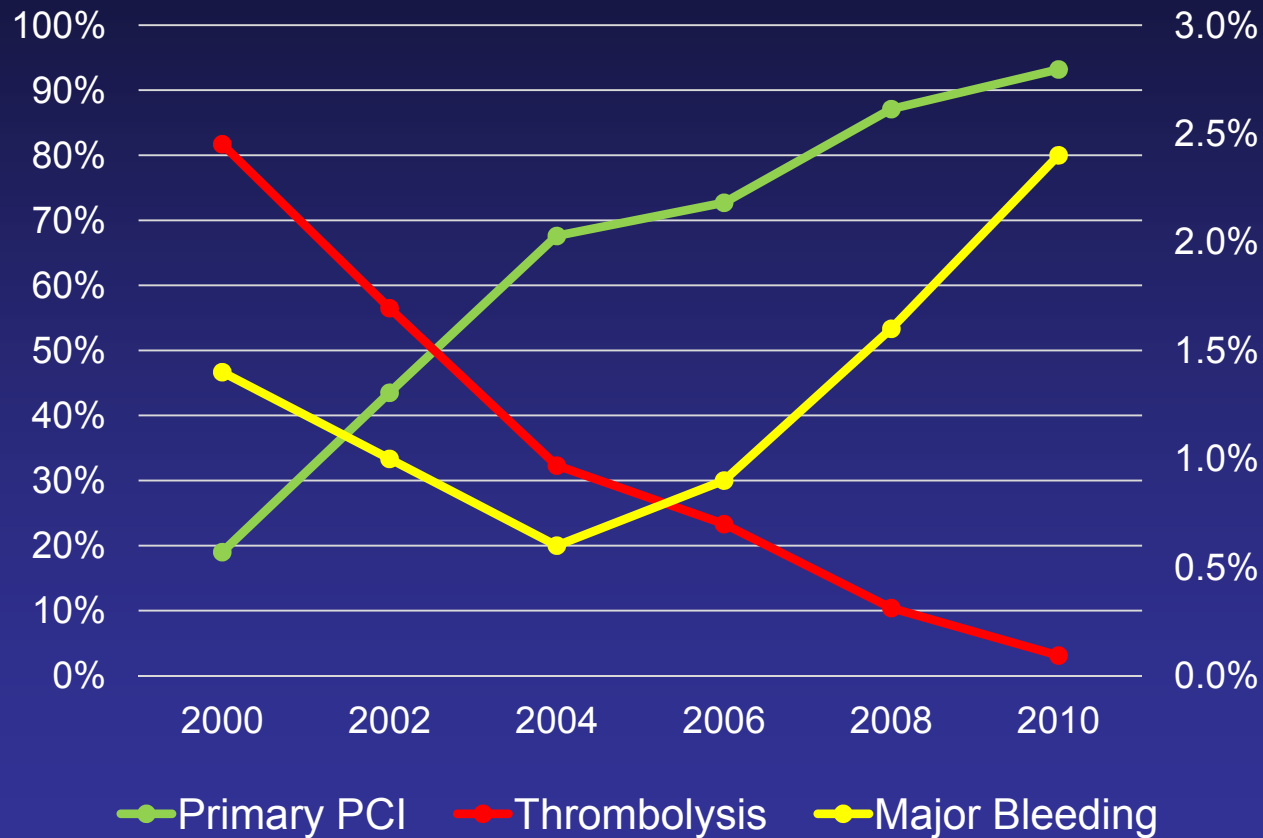
One year mortality

- Adjusted risk for 1year mortality:
  - Non-access site bleeding:
  - HR=2.9 (p=0.01),

  - Access site bleeding:
  - HR=1.9 (p=0.16)

Conclusions

- There is an increase in the rate of major bleeding among ACS patients over the past decade

- Independent predictors of major bleeding include female sex, increasing age, and primary PCI

- Only non-access site bleeding is adversely associated with 1-year mortality

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Predictors of 1 year mortality

Variable	Adjusted HR	95% CI	p value
Access site bleeding	1.9	0.8-4.7	0.161
Non-access site bleeding	2.9	1.3-6.6	0.01
Man	0.83	0.6-1.1	0.14
Age above 75	3.7	2.9-4.8	<0.001
Aspirin treatment	0.25	0.1-0.4	<0.001
Heparin treatment	1.2	0.9-1.6	0.313
Primary PCI	1.1	0.8-1.5	0.5
Diabetes mellitus	1.3	0.6-1.6	0.075
Kilip score>1	4.9	3.8-6.2	<0.001
Late surveys	0.71	0.6-0.9	0.01

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