Impact and predictive factors of bleeding complications in elderly patients admitted for an acute coronary syndrome: insights from the ANTARCTIC trial

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BACKGROUND AND PURPOSES:

Elderly patients are at high-risk of bleeding complications, particularly in the setting of acute coronary syndrome (ACS). Treatment adjustment by platelet function testing (PFT) failed to improve clinical outcomes in the randomized ANTARCTIC trial. This pre-specified sub-study aims at determining the independent correlates of bleedings and their relation to ischemic events and mortality.

METHODS:

We analyzed the 877 patients ≥75years included in the ANTARCTIC trial after an ACS and randomized to a strategy of dose or drug antiplatelet therapy adjustment or a conventional strategy without PFT. All patients received prasugrel 5mg daily after stenting and, in the monitoring group, treatment was adjusted according to PFT. Occurrence of clinically relevant and major bleeding (BARC classification) was collected up to one year. Correlation with major adverse events (MACE) defined as the composite of cardiovascular death, myocardial infarction and stroke was analyzed.

RESULTS:

One fifth of the patients were 85 year-old or more. Clinically relevant bleedings (BARC 2, 3 or 5) were frequent (20.6%, n= 181 patients) and major bleedings (BARC 3 or 5) occurred in 4.7% (n=24) patients at one year. One third of bleeding events occurred in the first month.

Sub-cutaneous and gastro-intestinal were the two predominant bleeding sites. Patients that occurred a clinically relevant bleeding had lower BMI, more frequently chronic respiratory failure, chronic renal failure or femoral puncture.

Clinically relevant bleeding (BARC 2/3/5)

7.1% of patients with bleedings at 30 days

20.6% of patients with bleedings at 1 year
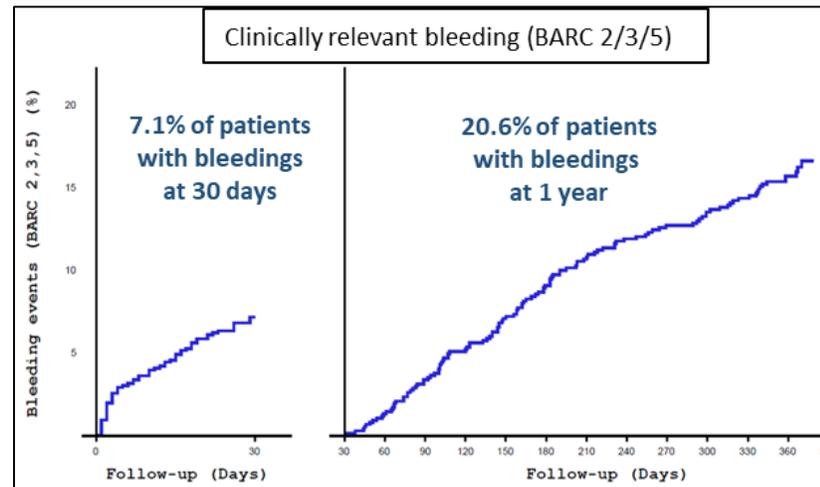
There was no difference according to the P2Y12 inhibitor used between patients with and without bleedings (p=0.91).

MACE occurred more frequently at one year in patients with a bleeding complication (16.6% vs 7.6%, adj.HR 2.04(1.24;3.38); p=0.005)

CV death + MI + Stroke

No bleeding events
Bleeding events

17.0%

8.1%

adj. HR 2.04 (1.24; 3.38); p=0.0052
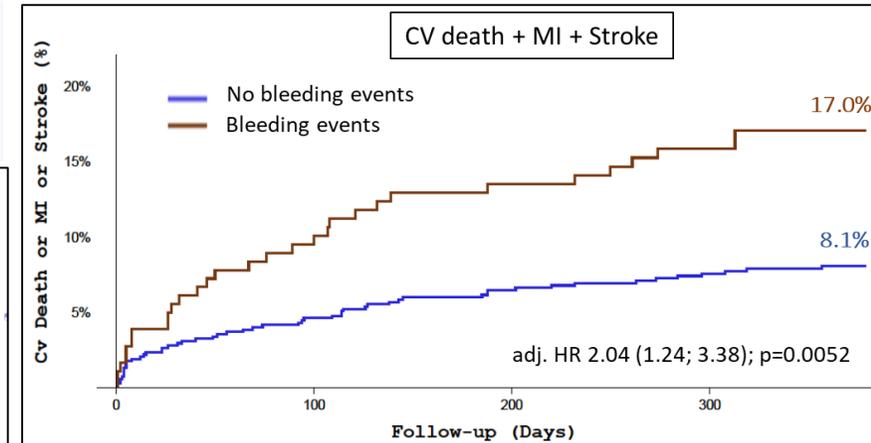
	Patient with clinically relevant bleeding	Patient without bleeding	Adj. Hazard-ratio (95% CI)	P-value
CV death	5/181 (2.8%)	18/696 (2.6%)	0.70 (0.24;1.99)	0.5002
Death (any)	12/181 (6.6%)	28/696 (4.0%)	1.20 (0.57;2.51)	0.6314
MI	18/181 (9.9%)	31/696 (4.5%)	2.40 (1.24;4.66)	0.0093
Definite ST	4/181 (2.2%)	6/696 (0.9%)	3.60 (0.92;14.06)	0.0655
Stroke	12/181 (6.6%)	7/696 (1.0%)	5.55 (2.04;15.06)	0.0008
CV death or MI or Stroke	30/181 (16.6%)	53/696 (7.6%)	2.04 (1.24;3.38)	0.0052

Predictive factors of major bleedings (BARC 3 or 5) were age>85 years [adj.HR(95%CI): 2.21(1.14;4.29); p=0.018] and anemia (hemoglobin<10g/dl) [adj.HR(95%CI): 5.28(1.16;23.96); p=0.031].

CONCLUSIONS:

Clinically relevant bleedings (BARC 2,3 or 5) occurred in fifth of this elderly population and was associated with a two-fold increase of ischemic events Age itself remained an independent correlate of bleeding in this population of 75 year-old or more.