Arrhythmias and Clinical EP

GDF-15 FOR RISK STRATIFICATION IN ATRIAL FIBRILLATION TREATED WITH APIXABAN OR WARFARIN: INSIGHTS FROM THE ARISTOTLE TRIAL

Poster Contributions
Hall C
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Authors: *Lars Wallentin, Ulrika Andersson, Uppsala Clinical Research Center, Uppsala, Sweden*

Background: GDF-15, high sensitivity troponin-I (hs-TnI) and NT-proBNP levels predict cardiovascular events in healthy elderly subjects, and in patients with acute coronary syndrome and heart failure. Hs-TnI and NT-proBNP are also prognostic in atrial fibrillation (AF). We evaluated the prognostic value of GDF-15 in addition to hs-TnI and NT-proBNP during treatment with apixaban or warfarin in patients with AF in the ARISTOTLE trial.

Methods: Biomarkers were measured at randomization in 14,798 patients. Efficacy and safety outcomes were compared across quartiles of GDF-15 adjusted for baseline characteristics, other biomarkers and randomized treatment. Treatment effects were compared across GDF-15 quartiles.

Results: There were continuous positive relationships between the GDF-15 level and stroke, mortality and major bleeding. The prognostic value of GDF-15 was independent of clinical characteristics and the CHA2DS2VASc score. Adjusting for biomarkers attenuated the prognostic value of GDF-15 for stroke while death and major bleeding remained (Table). Apixaban consistently reduced stroke, mortality and bleeding, regardless of GDF-15 levels (p > 0.10).

Conclusions: GDF-15 is an independent risk indicator for stroke, death and major bleeding in AF. The prognostic value for bleeding and death remained after adjusting for hs-TnI and NT-proBNP. The benefits of apixaban over warfarin were consistent regardless of GDF-15 level.

Table. Outcomes in relation to quartiles of GDF-15

Outcome	GDF-15 (ng/L)	n	Events (%/yr)	HR (95% CI) adjusted for base-line characteristics	p-value	HR (95% CI) adjusted also for TnI & NT-proBNP	p-value
Stroke/SEE	<=977	3705	67 (0.90)	Reference	.		.
	>977-1383	3697	86 (1.21)	1.14 (0.82-1.58)	.	1.04 (0.75-1.45)	.
	>1383 - 2052	3699	109 (1.58)	1.36 (0.98-1.88)	.	1.20 (0.86-1.68)	.
	>2052	3697	134 (2.03)	1.66 (1.20-2.31)	0.0111	1.35 (0.94-1.94)	0.3161
Major bleed	<=977	3698	85 (1.22)	Reference	.		.
	>977-1383	3691	132 (2.01)	1.34 (1.02-1.77)	.	1.28 (0.96-1.69)	.
	>1383 - 2052	3694	190 (3.05)	1.83 (1.40-2.39)	.	1.64 (1.24-2.16)	.
	>2052	3684	262 (4.53)	2.45 (1.87-3.21)	<0.0001	1.98 (1.47-2.66)	<0.0001
Death	<=977	3705	102 (1.34)	Reference	.		.
	>977-1383	3697	185 (2.54)	1.72 (1.35-2.21)	.	1.50 (1.17-1.93)	.
	>1383 - 2052	3699	286 (4.04)	2.40 (1.89-3.04)	.	1.85 (1.44-2.37)	.
	>2052	3697	488 (7.19)	3.53 (2.79-4.47)	<0.0001	2.09 (1.62-2.71)	<0.0001