

Clinical outcomes of patients with newly diagnosed atrial fibrillation who refused anticoagulation: findings from the global GARFIELD-AF registry

Patricia Apenteng¹, David A Fitzmaurice¹, Saverio Virdone², A. John Camm³, Keith A. A. Fox⁴, Jean-Pierre Bassand^{2,5}, Samuel Z. Goldhaber⁶, Shinya Goto⁷, Sylvia Haas⁸, Alexander G.G. Turpie⁹, Freek W.A. Verheugt¹⁰, Frank Misselwitz¹¹, Gloria Kayani², Karen S. Pieper², Ajay K. Kakkar^{2,12} for the GARFIELD-AF Investigators

¹University of Warwick, Coventry, UK; ²Thrombosis Research Institute, London, UK; ³St. George's University of London, London, UK; ⁴University of Edinburgh, Edinburgh, UK; ⁵University of Besançon, Besançon, France; ⁶Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA; ⁷Tokai University, Kanagawa, Japan; ⁸Technical University of Munich, Munich, Germany; ⁹McMaster University, Hamilton, Canada; ¹⁰Onze Lieve Vrouwe Gasthuis (OLVG), Amsterdam, The Netherlands; ¹¹Bayer AG, Berlin, Germany; ¹²University College London, London, UK

BACKGROUND

- Atrial fibrillation (AF) increases the risk of stroke five-fold and the risk of death two-fold¹.
- Anticoagulation therapy (AC) reduces the risk of stroke and death at the cost of an increased risk of bleeding².
- Patient refusal of AC and its impact on outcomes is not well understood.

PURPOSE

- To investigate clinical outcomes of patients with AF at high risk of stroke (CHA₂DS₂-VASc≥2) who refused AC vs patients who received AC.

METHODS

- GARFIELD-AF is an international, prospective, registry of patients with newly diagnosed non-valvular AF and ≥1 investigator-determined stroke risk factor³.
- We analysed two-year outcomes of non-haemorrhagic stroke/systemic embolism (stroke/SE), major bleeding and all-cause mortality in patients at high risk of stroke who refused AC and who received AC.
- Hazard ratios were obtained through a Cox model using the propensity method of overlap weighting to balance covariates in the population.

RESULTS

- Out of 43,154 participants, 13,283 (30.8%) participants at high risk of stroke did not receive AC at baseline.
- The reason for not receiving AC was unavailable for 38.7% (5146/13283); of the patients with a known reason, 12.5% (1014/8137) refused AC.
- The GARFIELD-AF score⁴ for mortality, indicating the expected risk of dying within 2 years, was higher in patients on AC than in patients refusing AC (Table 1).

Table 1. Participant baseline characteristics according to acceptance and refusal of AC

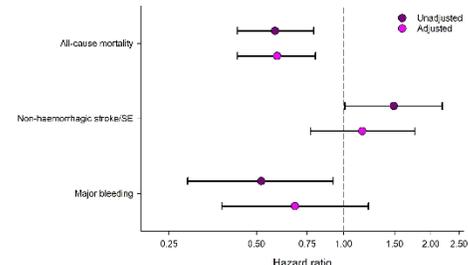
Baseline characteristics	On AC (N=29,871)	Refused AC (N=1014)	Not on AC for other reasons (N= 7123)
Female, %	49.5	48.3	52.1
Age, median (Q1;Q3), years	73.0 (67.0; 79.0)	72.0 (75.0; 78.0)	72.0 (65.0; 80.0)
CHF	24.9	27.3	23.4
Hypertension	82.6	82.4	79.0
Diabetes mellitus	26.2	25.0	22.7
Prior stroke/TIA/SE	14.0	12.2	11.5
Moderate to severe CKD	13.4	13.5	12.7
Vascular disease	16.1	17.7	19.2
Prior bleeding	1.9	2.8	6.3
NOAC use	40.3	-	-
VKA use	59.7	-	-
Antiplatelet use	22.5	79.4	70.3
CHA ₂ DS ₂ VASc score, median (Q1; Q3)	4.0 (3.0; 4.0)	3.0 (3.0; 5.0)	3.0 (2.0; 4.0)
HAS-BLED score, median (Q1; Q3)	1.0 (1.0; 2.0)	1.0 (1.0; 2.0)	2.0 (1.0; 2.0)
GARFIELD-AF mortality score (%), median (Q1; Q3)	6.6 (4.0-11.3)	5.2 (3.1-8.8)	5.7 (3.1-11.0)
GARFIELD-AF stroke score (%), median (Q1; Q3)	2.3 (1.7-3.3)	2.2 (1.6-3.1)	2.3 (1.6-3.3)
GARFIELD-AF bleeding score (%), median (Q1; Q3)	1.2 (0.9-1.7)	1.3 (0.9-1.8)	1.4 (0.9-2.0)

CHF: congestive heart failure; TIA: transient ischaemic attack; SE: systemic embolism; CKD: chronic kidney disease; NOAC: non-vitamin K oral anticoagulant; VKA: vitamin K antagonist

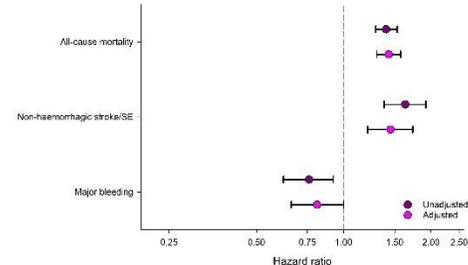
- The event rates of patients who refused AC vs who received AC were: stroke/SE 1.42 vs 0.95 (p=0.04), major bleeding 0.62 vs 1.20 (p=0.02), and all-cause mortality 2.28 vs 3.90 (p=0.0004).
- After adjustment, patients who refused AC still had a lower risk of all-cause mortality than patients who received AC (Figure 1a).

Figure 1. Unadjusted and adjusted hazard ratios for two year outcomes for a) patients on AC (ref) versus patients who refused AC and b) patients on AC (ref.) vs patients who were not anticoagulated for reasons different than refusal

a. Refuse AC vs on AC (ref.)



b. Not on AC for other reason vs on AC (ref.)



⁴Obtained using an overlap-weighted Cox model. Variables included in the weighting scheme are country and cohort enrollment, sex, age, ethnicity, type of AF, case setting, speciality and location, congestive heart failure, acute coronary syndromes, vascular disease, carotid occlusive disease, prior stroke/TIA/SE, prior bleeding, VTE, hypertension, hypercholesterolemia, diabetes, cirrhosis, moderate to severe CKD, dementia, hyperthyroidism, hypothyroidism, current smoking, heavy alcohol consumption, BMI, heart rate, stroke and diabetic blood pressure diagnosis

- Patients not on anticoagulation for reasons other than patient refusal were associated with worse mortality and stroke outcomes compared to patients on anticoagulation and patients who refuse anticoagulation (Figure 1b).

CONCLUSIONS

Overall, the rate of patient refusal of AC was low.

Patient refusal of AC is associated with a 0.6 lower rate of all-cause mortality. No evidence of differences in the risk of stroke or bleeding compared to patients on AC was observed.

Findings regarding lower mortality are counter intuitive.

Possible explanations for this result are:

- the subgroup of patients who refused AC was small
- there may be unobserved confounders associated with patient refusal
- findings do not take into account crossover which may be significant in patients who refused AC.

Further investigation of the rationale of patients who refuse AC and their clinical pathway may provide insight on their atypical outcomes.

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