Impact of Atrial fibrillation diagnosis or Carotid endarterectomy requirement on outcome in patients from the Triple Antiplatelets for Reducing Dependency after Ischaemic Stroke (TARDIS) trial

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BACKGROUND

- Carotid stenosis and atrial fibrillation (AF) are common causes of ischaemic stroke (IS) and transient ischaemic attack (TIA), and require carotid endarterectomy (CEA) and anticoagulation respectively to reduce recurrence risk.
- We assessed whether these interventions improve outcome using data from the TARDIS trial.

METHOD

- TARDIS assessed one month of intensive antiplatelet therapy versus guideline in 3096 patients with acute non-cardioembolic IS or TIA.
- Information regarding CEA requirement, AF diagnosis, recurrence and functional outcome was assessed centrally blinded to treatment assignment.
- Data are unadjusted odds ratio (OR) or mean difference (MD) with 95% confidence interval (CI) relative to no AF/CEA.

RESULTS

- Of the 3096, 3070 (99.2%) patients had data regarding AF and CEA: 118 (3.8%) patients were diagnosed with AF and 84 (2.7%) required a CEA.
- In comparison with others, AF and CEA patients were older (4.2 and 2.4 years respectively) and more likely to have a history of ischaemic heart disease (IHD) than the rest (Table 1).
- AF patients were also more likely to have been enrolled with stroke rather than a TIA (Table 1).

Table 1. Baseline Characteristics

	AF	No AF	CEA	No CEA
N	118	2952	84	2986
Age	73 (9.5)	68.8 (10.1)	71.3 (10.2)	68.9 (10.1)
Male %	66 (55.9)	1868 (63.3)	63 (75.0)	1871 (62.7)
History IHD %	23 (19.5)	378 (12.8)	20 (23.8)	381 (12.8)
Stroke %	100 (84.7)	2026 (68.6)	66 (78.6)	2060 (69.0)

RESULTS (Continued)

- By day 90, AF patients were more likely to have a stroke/TIA recurrence (Table 2, OR 2.31, 95% CI 1.30-4.10; 7 before diagnosis, 9 afterwards).
- They also had a shift to more dependency (modified Rankin Scale, OR 1.50, 95% CI 1.07-2.10, Figure 1) and disability (Barthel Index, MD -6.5, 95% CI -10.0 to -3.1).
- Outcomes of CEA patients were not significantly different from patients who did not require CEA.

Table 2. Day 90 outcomes for patients with and without AF

	AF	No AF	OR/MD (95% CI)	P
Recurrence (%)	15 (12.7)	183 (6.2)	2.31 (1.30, 4.10)	0.0044
- Stroke (%)	13 (11.0)	105 (3.6)	3.45 (1.84, 6.45)	< 0.001
- TIA (%)	2 (1.7)	86 (2.9)	0.64 (0.15, 2.65)	0.53
mRS [6]	2 [1, 3]	1 [1, 2]	1.50 (1.07, 2.10)	0.018
Barthel Index	83.3 (32.2)	93.2 (18.4)	-6.5 (-10.0, -3.1)	< 0.001
EQ-5D (HUS)	0.6 (0.4)	0.8 (0.3)	-0.1 (-0.1, 0.0)	0.014

Figure 1. Distribution of mRS in patients with and without AF

CONCLUSIONS

- Recurrence was more common in patients with AF than in other TARDIS patients; patients with AF also had worse functional outcomes.
- There was no difference in recurrence or functional outcomes between patients who did and did not require CEA.