BACKGROUND

- The aims of acute management of atrial fibrillation (AF) are twofold: the prevention of thromboembolic events through, for example, the use of anticoagulant therapies, and improvement of cardiac function.
- Whether the aim is to achieve sinus rhythm or to manage the ventricular rate depends upon patient preference and severity of AF-related symptoms.
- In cases in which AF does not terminate spontaneously, and if indicated, cardioversion to sinus rhythm can be attempted through either pharmacological means or by direct current conversion (DCC). As DCC is associated with a 1-2% risk of thromboembolism, appropriate anticoagulation for 3 weeks before the procedure (unless a transoesophageal echocardiography is done to exclude the presence of thrombus), and for at least 4 weeks following the procedure, is recommended in most patients.

RESULTS

- Of 5525 patients, 614 (11.1%) underwent DCC within 4 months of AF diagnosis.
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PURPOSE

To compare the baseline characteristics, antithrombotic treatment initiated at diagnosis, and clinical outcomes at 1 year of patients with newly diagnosed non-valvular AF who underwent DCC within 4 months of diagnosis with those who did not.

METHODS

- GARFIELD is an ongoing, international, observational study of consecutively recruited adults (≥18 years) with newly diagnosed AF (≥6 weeks previously) non-valvular AF and ≥1 additional investigator-determined stroke risk factors. Such risk factors were not prespecified in the study protocol, nor were they limited to those in risk-stratification schemes such as CHADS2 or CHA2DS2-VASc.
- Investigator sites were representative of the distribution of AF care settings in each country.
- A total of 10,614 patients were recruited into cohort 1 at 5228 centers in 5228 countries over a 2-year period; of these patients, 5893 were recruited retrospectively as a validation cohort, and 5525 were recruited prospectively, and comprise the study population for this analysis.
- Outcomes at 1 year after AF diagnosis (all-cause death, stroke/systemic embolism [SE], and lower risk scores than DCC– patients (Table).
- Of the DCC+ patients, 6.9% received no antithrombotic therapy and 12.5% received appropriate anticoagulation for stroke prevention. Event rates at 1 year were lower among DCC+ than DCC– patients, but after adjustment for other statistically significant differences (Figure 2).

FIGURE 1 Antithrombotic treatment initiated within 4 months of AF diagnosis according to DCC– patients. Poll (%), Table (inset).

FIGURE 2 Clinical outcomes at 1 year after AF diagnosis for DCC+ versus DCC– patients.

TABLE Patient characteristics at AF diagnosis, according to treatment strategy

| Variable | DCC+ (n = 5525) | DCC– (n = 4911) | P value*
|----------|-----------------|-----------------|-------
| Men, %   | 58.6            | 55.6            | 0.042 |
| Age, median (IQR), years | 68 (60-75) | 72 (63-78) | <0.001 |
| BMI, mean ± SD, kg/m² | 28.8±5.4 | 27.1±5.5 | <0.001 |
| Pulse, mean ± SD, bpm | 95.7±29.8 | 87.5±25.1 | <0.001 |
| Smoking status (current/previously), % | 39.6 | 34.1 | 0.01 |
| Cardiovascular disease | 32.1 | 28.8 | 0.02 |
| Diabetes mellitus | 33.6 | 30.1 | 0.06 |
| Pulmonary embolism | 13.0 | 11.4 | 0.07 |
| Pulmonary embolism | 0.056 | 0.06 |
| Major bleeding | 0.007 | 0.007 |
| Mortality | 0.013 | 0.013 |
| Heart failure | 0.013 | 0.013 |

CONCLUSIONS

- DCC was infrequent in this international registry even though patients were newly diagnosed with AF, with only 11% of patients undergoing this technique.
- DCC+ patients were younger and had lower risk scores than DCC– patients.

LIMITATIONS

- One-year outcomes, after adjustment for relevant baseline characteristics and antithrombotic therapy at 4 months, did not differ significantly between DCC+ and DCC– patients, although rates were lower among DCC+ patients.
- These contemporary data from everyday clinical practice suggest that, despite guideline recommendations, a sizeable proportion of DCC+ patients do not receive oral anticoagulant therapy for stroke prevention.
- These data are preliminary so the results should be interpreted with caution.

DECLARATION OF INTEREST

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