Abstract: **P1434**

**Differences in thromboembolic complications between paroxysmal and persistent atrial fibrillation patients following electrical cardioversion: an analysis from the ENSURE-AF study**

**Authors:**

J L Merino¹, GYH Lip², J Jin³, H Heidbuchel⁴, AA Cohen⁵, M Ezekowitz⁶, A Goette⁷, ¹University Hospital La Paz - Madrid - Spain, ²University of Birmingham, Institute of Cardiovascular Sciences - Birmingham - United Kingdom, ³Daiichi Sankyo, Inc - Basking Ridge, New Jersey - United States of America, ⁴University of Antwerp, Cardiology - Antwerp - Belgium, ⁵University Pierre & Marie Curie Paris VI - Paris - France, ⁶Sidney Kimmel Jefferson Medical College at Thomas Jefferson University, Department of Cardiovascular Medicine - Broomall, Pennsylvania - United States of America, ⁷University Hospital Magdeburg, Working Group: Molecular Electrophysiology - Magdeburg - Germany,

**Topic(s):**

Rhythm Control, Cardioversion

**Citation:**

Daiichi Sankyo

**Background/Introduction:** Despite guideline recommendations, baseline antithromboembolic prevention often differs between patients with paroxysmal atrial fibrillation (pxAF) and persistent AF (psAF). Whether this may result in different outcomes following electrical cardioversion (ECV) despite proper anticoagulation at the time of the procedure is presently unknown. ENSURE-AF (NCT02072434) was the largest prospective randomised clinical trial of ECV in nonvalvular AF.

**Purpose:** This analysis investigated the primary endpoint (composite of stroke, systemic embolic event, myocardial infarction, and cardiovascular mortality) following ECV in patients with pxAF vs psAF.

**Methods:** ENSURE-AF—a multicentre, PROBE evaluation trial—compared edoxaban 60 mg QD with enoxaparin–warfarin in 2199 subjects undergoing ECV of nonvalvular AF. All patients received =3 weeks of proper anticoagulation or transoesophageal echocardiogram (TEE) before ECV. Clinical characteristics and outcomes were compared between subjects based on type of AF present at baseline.

**Results:** In total, 415 subjects had pxAF and 1777 had psAF. Patients with pxAF were significantly older (65.8 ± 10.3 vs 63.9 ±10.5 years, p = 0.001) and more frequently hypertensive (82.7% vs 77.2%, p = 0.01) compared with psAF patients. Congestive heart failure was more common in patients with psAF (46.7%) than pxAF (31.3%, p <0.0001). CHA2DS2-VASc (score >2: 52.0% vs 49.5%, p = 0.4375) and prior myocardial infarction (6.5% vs 6.8%, p = 0.91) did not significantly differ between pxAF and psAF patients. At enrolment, more patients with pxAF were anticoagulant-naïve (46.5% vs 22.8%, p <0.001), taking aspirin (30.4% vs 16.1%, p <0.001), and had lower international normalized ratio relative to patients receiving warfarin (1.3 ± 0.7 vs 1.6 ± 0.7, p <0.0001). More patients with pxAF at baseline were stratified to TEE (65.1 vs 51.2%, p <0.001) compared with psAF patients. During the study (before ECV and at 58 days follow-up), primary endpoint events were marginally significantly higher in patients with pxAF vs psAF (1.5% vs 0.6%, p = 0.0571). There were no differences in all (2.9% vs 3.1%, p = 0.83), major (0.5% vs 0.3%, p = 0.65), and the composite of major and clinically relevant nonmajor (1.5% vs 1.2%, p = 0.66) bleeding complications between the pxAF and psAF patients.

**Conclusions:** Patients with pxAF may have more frequent major cardiovascular events than those with psAF following ECV despite proper anticoagulation at time of procedure. Patients with pxAF were more frequently anticoagulant-naïve despite similar CHA2DS2-VASc scores compared with psAF patients. It is unclear
whether outcome differences were due to changes in thromboprophylaxis regime in the former or to longer exposure to anticoagulants in the latter.