

Conclusion: In everyday clinical practice, AF patients with a history of stroke/TIA are at greater risk of fatal and non-fatal events within the first year of diagnosis than those without a history of stroke/TIA.

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Atrial fibrillation and treatment changes in cryptogenic stroke patients with an implantable loop recorder for continuous cardiac rhythm monitoring

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Introduction: This interim analysis evaluates the risk profile and incidence of atrial fibrillation (AF) in patients who underwent continuous monitoring with an implantable loop recorder (ILR) for cryptogenic (unexplained) stroke or transient ischemic attack (TIA).

Methods: The observational INSIGHT XT study prospectively enrolled patients who received an ILR with dedicated diagnostics for atrial fibrillation, irrespective of the clinical indication. Of 1002 patients enrolled in the study between Aug 2008 and Jan 2012, 121 received the ILR to evaluate cryptogenic stroke or TIA. The definition of cryptogenic stroke/TIA was at the investigators' appraisal and no unified approach to patient work-up was required. This analysis includes 74 patients with cryptogenic stroke or TIA for whom at least one follow-up visit was available at the time of interim analysis.

Results: The mean age was 63±12 (50% female). Stroke was the index event in 46 of 74 (62%) of patients. 61% had hypertension, 14% diabetes, and none had heart failure. The mean CHADS2 score was 3.0±0.8 and the mean CHA2DS2VASc score 4.0±1.2. Most patients (72%) had no prior symptoms or cardiac rhythm disturbances, whereas 18% had a history of prior palpitations. Sixty-seven patients were taking antiplatelet medication and four were on oral anticoagulation (OAC) at enrollment. During a median follow up of 12 months (IQR 7 to 18) AF was reported in 17 patients (23%) and two patients were started on OAC and 10 patients were converted from antiplatelets to OAC. Five patients experienced a stroke or TIA (median time to event 1.2 months), of which one patient died. Three of the patients with stroke or TIA had AF detected prior to the recurrent event.

Conclusion: Continuous monitoring with an ILR in patients with cryptogenic stroke of TIA detects a high proportion of AF; this can be attributed to longer continuous monitoring in this study. These patients have high CHADS2/CHA2DS2VASc scores; documenting AF in these cases may therefore be clinically relevant in order to decide appropriate treatment.

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Treatment with cilostazol prevents incidence of stroke in haemodialysis patients with peripheral artery disease: propensity score-adjusted analysis

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Background and objectives: Cilostazol, a selective inhibitor of phosphodiesterase 3, has been reported to have beneficial effects on preventing atherosclerotic events in general population.

This study with a propensity score-adjusted analysis investigated the effects of cilostazol use on preventing incidence of stroke in haemodialysis (HD) patients with peripheral artery disease.

Design, setting, participants, and measurements: This study consisted of 626 HD patients with a clinical diagnosis of peripheral artery disease. They were divided into two groups: patients receiving 100mg cilostazol twice daily in conjunction with standard therapy (n = 249 patients, cilostazol group) and those not administered cilostazol (n = 377 patients, control group). They were followed-up for up to 10 years, and data on incidence of stroke as the primary endpoint were collected. Also composite endpoints of major adverse events including all-cause mortality, non-fatal myocardial infarction, and stroke were evaluated. To adjust for baseline differences between the two groups, a propensity score analysis with all baseline variables was performed.

Results: By a propensity score adjustment, 10-year event-free survival rate from stroke was significantly higher in the cilostazol group compared to the control group [82.2% vs. 74.6%, hazard ratio (HR) 0.48; 95% confidence interval (CI) 0.25-0.92; P = 0.028]. Also, event-free rate from all-cause mortality was significantly higher in the cilostazol group than in the control group (64.9% vs 50.8%; HR = 0.55; 95% CI, 0.38-0.78, P = 0.0010). Freedom from composite endpoints of major adverse events was frequently seen in the cilostazol group than in the control group (58.7% vs 44.0%; HR = 0.52; 95% CI, 0.41-0.79, P = 0.0010). Even after adjusting for other confounders, treatment with cilostazol was an independent predictor of preventing stroke (HR 0.51; 95% CI 0.26-0.97, P = 0.040),

all-cause mortality (HR 0.61; 95% CI 0.41-0.92, P = 0.018), and major adverse events (HR 0.64; 95% CI 0.45-0.91, P = 0.013).

Conclusion: Cilostazol administration improves long-term clinical outcome in HD patients with PAD.

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Clinical characteristics of atrial fibrillation patients with anemia: from the Fushimi AF registry

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Purpose: Atrial fibrillation (AF) is a common arrhythmic disorder among the elderly, and is increasing significantly as the population ages (reportedly 0.6% of total population in Japan). Anemia is often observed in patients with AF, but clinical characteristics of those patients have not been well described.

Methods: The Fushimi AF Registry, a community-based prospective survey, was designed to enroll all of the AF patients living in Fushimi-ku, Kyoto, Japan. Fushimi-ku is densely populated with a total population of 283,000, and is assumed to represent a typical urban community in Japan. At present, we have enrolled 3,378 Japanese AF patients (1.2% of total population) from March 2011 to December 2012. We defined anemia as reduced hemoglobin level (<11 g/dl), and investigated the clinical background of AF patients with anemia.

Results: Among 3,141 patients in the Registry whose hematological values were available, 547 patients (17.4%) had anemia. AF patients with anemia were older than those without anemia (79.6±10.3 vs. 73.4±10.5 years of age; p<0.001). They were more likely to have various co-morbidities; heart failure (43.1% vs. 25.8%; p<0.001), coronary artery disease (19.5% vs. 14.8%; p=0.006), peripheral artery disease (6.2% vs. 4.2%; p=0.04), chronic kidney disease (52.5% vs. 22.3%; p<0.001), and history of major bleeding (4.2% vs. 1.5%; p<0.001). There was no significant difference in the prevalence of hypertension or diabetes between anemic and non-anemic AF patients (62.2% vs. 62.3%; p=0.95, 25.3% vs. 24.0%; p=0.54, respectively). Anemic AF patients showed greater CHADS2 score and CHA2DS2-VASc score (2.58±1.36 vs. 2.05±1.33; p<0.001, 4.22±1.64 vs. 3.35±1.68; p<0.001, respectively), and higher prevalence of previous stroke (25.8% vs. 18.6%; p<0.001). Patients receiving the prescription of oral anticoagulants were less in anemic patients (44.4% vs. 52.4%; p<0.001), and the vast majority of them were warfarin (43.0% vs. 49.6%; p=0.005). In patients with anemia, the presence of chronic kidney disease (CKD) did not affect the prevalence of previous stroke (25.8% in anemic AF patients with CKD vs. 27.1% in anemic AF patients without CKD; p=0.67) or that of major bleeding (4.9% vs. 3.6%; p=0.35).

Conclusion: The Fushimi AF registry represents the clinical profile of real-world Japanese AF patients. AF patients with anemia were associated with higher prevalence of stroke as well as bleeding, irrespective of the presence of CKD.

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Pulse wave velocity independently predicts incidence of stroke in patients with essential hypertension: data from a Greek 6-year-follow-up study

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Purpose: Although arterial stiffening is related to atherosclerosis progression, its prognostic role in cerebrovascular events in hypertension is not fully elucidated. The aim of the present study was to assess the predictive role of arterial stiffness for the incidence of stroke in a cohort of essential hypertensive patients.

Methods: We followed up 1128 essential hypertensives (mean age 56.1 years, 587 males, office blood pressure (BP)=144/91 mmHg) free of cardiovascular disease for a mean period of 6 years. All subjects had at least one annual visit and at baseline underwent blood sampling for assessment of metabolic profile and arterial stiffness was evaluated on the basis of carotid to femoral pulse wave velocity (PWV), by means of a computerized method (Complior SP). The distribution of PWV was split by the median (8.1 m/sec) and accordingly subjects were classified into those with high (n=566) and low values (n=562). Stroke was defined as rapid onset of a new neurological deficit persisting at least 24 hours unless death supervened confirmed by computed tomography and magnetic resonance angiography and/or cerebrovascular angiography findings.

Results: The incidence of stroke over the follow-up period was 2.03%. Hypertensives who had stroke (n=23) compared to those without stroke at follow-up (n=1105) were older at baseline (63±8 vs 55±10 years, p=0.015), had higher office BP levels (155±13 vs 143±17 mmHg, p=0.018) and prevalence of high PWV levels (67% vs 43%, p=0.021). No difference was observed between hypertensives with stroke and those without stroke with respect to baseline renal function and lipid levels (p=NS for all). By univariate Cox regression analysis it was revealed that high baseline PWV levels predicted stroke (hazard ratio=1.307, p=0.014). Moreover, in multivariate Cox regression model, baseline age (hazard ratio=1.098, p=0.03) and PWV (hazard ratio=1.125, p=0.017) but not baseline office BP levels turned out to be independent predictors of stroke.

Conclusions: In essential hypertensive patients, PWV predicts future development of stroke, independently of age and office BP. These findings support that