1 group were older and more female, and had higher LAVI compared to those without them. Multivariate logistic regression analysis revealed that LAVI but not female gender was an independent predictor of LAA thrombi/SEC. When assigning 1 point for high LAVI (>7.3 ml/m²), CHADS² score combined with LAVI more successfully risk stratified patients with NVAF than CHA²DS²-VASc score (Figure B).

3.9(1000 person-years). Multivariate analysis adjusted for baseline covariates indicated that PSS did not increase the risk of ischemic stroke (adjusted hazard ratio: 0.84, 95% confidence interval: 0.63–1.12, P = 0.24).

Conclusions: PSS is not associated with an increased risk of ischemic stroke subsequent to diagnosis.

P401  |  BEDSIDE
Rationale and preliminary results of the imaging of the plaque (IMPLAC) study. A multi-modality approach to identify vulnerable carotid plaques in relation to brain damage in asymptomatic patients
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Rationale: To date, the decision to perform carotid endarterectomy (CEA) in asymptomatic patients has been solely based on the severity of the stenosis on ultrasound. Targeted new non-invasive imaging strategies that allow characterization of plaque composition, in term of inflammation and neovascularization and biological activity might help to identify asymptomatic patients that could benefit from intensive medical treatment or CEA.

Methods: In the IMPLAC study we will assess prospectively the incremental value of adding contrast-enhanced ultrasound (CEUS) imaging for the identification of plaque neovascularization and position emission tomography (PET)/computed tomography (CT) with the radiotracer [11C]-PK11195 to quantify vascular inflammation for the prediction of ischemic cerebral burden measured by longitudinal magnetic resonance imaging (MRI) studies over an 18-month period in 60 asymptomatic patients with 40-70% carotid stenosis. The main parameters measured to define the cerebral ischemic burden will be the presence, distribution and volume of white matter lesions (WMIs) at MR at baseline and 18 months follow-up.

Results: So far 15 patients have been enrolled in the study over a period of 7 months demonstrating the feasibility of the protocol. By August 2013 we expect that 40-50% of the patient population will be enrolled.

Conclusions: Identification of intraplaque neovascularization by CEUS and plaque inflammation by PET/CT with [11C]-PK11195 could allow a better risk stratification of asymptomatic patients with sub critical aortic stenosis

P402  |  BEDSIDE
Decreased left atrial peak systolic strain evaluated by two-dimensional speckle tracking reflects left atrial appendage dysfunction in sinus rhythm patients with acute ischemic stroke
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It is well known that transesophageal echocardiography (TEE) is useful for evaluating left atrial appendage (LAA) function, but TEE is a semi-invasive procedure. Many clinical studies have shown a close relationship between LAA thrombus formation and left atrial (LA) mechanical remodeling. Left atrial (LA) strain assessed by two-dimensional speckle tracking echocardiography is a new tool to evaluate LA function. However, the association of LA strain and LAA function remains to be fully determined. We performed transthoracic and transesophageal echocardiography in 58 consecutive patients with acute ischemic stroke within 7 days of onset and sinus rhythm at TEE performed (40 males, mean age 71±11 years). Longitudinal LA strain was obtained using two-dimensional speckle tracking imaging at each LA segment, and peak systolic strain (S-LAs) was calculated by averaging the results for each segment. Eight patients had LAA thrombus and/or severe LAA spontaneous echo contrast (LAA-SEC). S-LAs was significantly lower in patients with LAA dysfunction than in those without (34.5±12.5 vs. 15.9±7.2%, P<0.01). S-LAs was significantly correlated with LAA eV (r=0.466, P<0.01). The optimal cut off value of S-LAs for predicting LAA dysfunction was determined for 21% (Figure). In patients with LAA dysfunction, 7 patients had low S-LAs. In those 6 patients (86%) had history of paroxysmal atrial fibrillation before stroke onset. Multivariate logistic regression analysis showed that S-LAs was an independent predictor of LAA thrombus and/or LAA-SEC (odds ratio 1.758, P<0.01). In concl-

Figure 1. Receiver operating characteristics (ROC) curve analysis of LA peak systolic strain for predicting LAA dysfunction.