thromboembolism. By analyzing the correlation of transesophageal echocardiography parameters and atrial fibrillation thromboembolism risk assessment indicators (CHADS2, and CHA2DS2-VASc), a new prediction method of risk of stroke in patients with atrial fibrillation.

Methods: 304 patients that diagnosed with atrial fibrillation in our hospital from October 2010 to October 2012, and score to each patient according to standard of CHADS2, and CHA2DS2-VASC. Patients were divided into low, medium and high-risk groups. After admission, each patient underwent transesophageal ultrasound echocardiography, internal diameter of right ventricle, interventricular septum thickness, left ventricular internal diameter, left ventricular posterior wall, right ventricular outflow tract diameter, aortic root, pulmonary artery diameter, left atrial diameter, pulmonary artery diameter, speed of aortic valve flow and the pulmonary valve orifice flow, left ventricular ejection fraction (LVEF). We analysis correlation of ultrasound heartbeat graph parameters and thromboembolic risk scoring by using Spearman rank.

Results: (1) The ultrasound indicators that has a significant correlation with CHADS2, score are: interventricular septal thickness, left ventricular posterior wall thickness, left atrial diameter, pulmonary artery diameter, right ventricular diameter, the inner diameter of the aortic root, LVEF. (2) The ultrasound indicators that has a significant correlation with CHADS2-VASc score are: Interventricular septal length, left ventricular posterior wall thickness, left atrial diameter, pulmonary artery diameter, aortic valve flow velocity, LVEF.

Conclusions: With the CHADS2, and CHA2DS2-VASc score increased, cardiac ultrasound showed the enlargement of left atrium, left ventricular hypertrophy, pulmonary artery diameter widened and LVEF decreased. In addition, the internal diameter of right ventricle, aortic root diameter is associated with CHADS2 score; aortic valve flow velocity is associated with CHA2DS2-VASc score. This preliminary study demonstrated that the echocardiographic index such as thickness of interventricular septum, posterior wall, left atrial diameter, diameter of pulmonary artery, aortic valve flow rate and LVEF value may be the identification index of thromboembolism risk in non-valvular atrial fibrillation patients.

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Evaluation of the embolism risk score systems in patients with atrial fibrillation
Jiang Shasha, Cong Tao, Chang Dong, Dong Yingxue, Zhang Shulong
First affiliated hospital of Dalian Medical University

Objectives: Atrial fibrillation (AF) is associated with a significantly high risk of stroke and systemic embolisms, several scoring system are currently used to stratify thromboembolic risk in AF patients. We evaluate the predictive power of different scoring system to identify the suitable scoring system for Chinese atrial fibrillation patients.

Methods: 425 consecutive patients treated in our hospital with paroxysmal or persistent atrial fibrillation are selected. The clinical data, such as gender, age, blood pressure (BP), blood lipids, LVEF, history of smoking, embolism, heart failure (HF), diabetes mellitus (DM), coronary heart disease (CHD), hyperthyroidism, valvular heart disease (VHD), myocardial infarction (MI), peripheral arterial disease (PAD), large aortic plaque, are collected for each patient. Telephone follow-up are done for each patient. The patients with definitive stroke are defined as stroke positive group. A therapy (drugs or ablation) was instituted for 49/291 patients (17%) in the active monitoring group and 8/155 (5.1%) in the control group. The primary comparison was the difference of 92 patients, 54 had AF (59%) and 38 had non-AF (41%). The frequency of embolic stroke or systemic embolism within 12 months was 3.7% of the intermediate-risk group and 4.1% of the high-risk group (P=0.23). Using the CHADS2-VASc score for stroke risk of 2 or more. The patients were randomly assigned to an active group, followed by Biotronik HM, or a control group without HM surveillance. The primary criteria was the comparison of the time from enrollment to the first SVA-related intervention between the groups.

Results: A total of 395 patients in 58 centers (mean age=79±8 y.o, 63% male, mean CHADS2-VASc score=3.7±1.2) were followed during 1.8±3.3 months. There was no difference in the baseline clinical characteristics between the groups. The most prevalent concomitant comorbidities were hypertension (82%) patients, diabetes (29%) and vascular disease (24%). Implantation indications were atrio-ventricular heart disease (43%) and vascular disease (24%) in 20% and others in 3%. The global SVA incidence was 25% (29% in the active group vs 22% in the control group, P=ns). A therapy (drugs or ablation) was instituted for 49/291 patients (17%) in the active group vs 43/304 patients (14%) in the control group (P=ns). The median time from enrollment to the first therapy for SVA was 114 [44; 241] days in the active group vs 224 [67; 366] days in the control group, representing a median gain of 110-days in SVA management (50% reduction, P=0.01). Over these 92 patients, 54 had AF (50%) and 38 had flutter or atrial tachyarrhythmia (41%). Anticoagulation was initiated in 80% of patients and antiarrhythmic drugs in 55%. In the active group, 93% of the notifications transmitted by HM were appropriate for SVA detection. The remaining 7% were inappropriate for SVA (over-sensing, noise or non-sustained VT).

Conclusions: The SETAM trial demonstrated that HM allows earlier detection and treatment of SVA in patients implanted with pacemakers. It suggests that HM could be expanded to a maximum of patients in daily clinical practice in order to optimize their SVA management. The next step is to report how early detection of SVA with HM can possibly improve the patients clinical outcome.