Abstract: P3780

Clinical characteristics and outcomes in Japanese atrial fibrillation patients with valvular heart disease: the Fushimi AF Registry

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Topic(s):
Prevalence and Incidence of Atrial Fibrillation

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Pfizer, Bristol-Myers Squibb, Boehringer Ingelheim, Bayer Healthcare and Daiichi Sankyo

Background: Previous studies have suggested that valvular atrial fibrillation (VAF), defined as atrial fibrillation (AF) patients with prosthetic valve or rheumatic mitral stenosis, increased the risks of thromboembolism. However, clinical characteristics and outcomes of VAF and non-valvular AF (NVAF) patients with other valvular heart disease (VHD) has not been fully described.

Method: The Fushimi AF Registry was designed to enroll all of the AF patients. In the entire cohort (4,454 patients), follow-up data including echocardiography data were available for 3,566 patients. We compared clinical characteristics and outcomes between 131 VAF patients (3.7%), 583 NVAF with VHD (NVAF-VHD: 16.3%) and 2,852 without VHD (Non-VHD: 80.0%).

Result: Compared with Non-VHD, patients in VAF and NVAF-VHD were older (VAF vs. NVAF-VHD vs. Non-VHD: 74.3 vs. 76.9 vs. 72.9 years, respectively; p=0.0001), more often female (56.5% vs. 51.1% vs. 36.9%, p=0.0001), less in body weight (54.3 vs. 54.7 vs. 60.6 kg, p=0.0001), more persistent/permanent type (64.1% vs. 65.4% vs. 45.8%, p=0.0001), more likely to have heart failure (61.8% vs. 53.2 % vs. 23.3%, p=0.0001), had higher CHADS2 score (2.18 vs. 2.49 vs. 1.96, p=0.0001) and CHA2DS2-VASc score (3.71 vs. 4.02 vs. 3.26, p=0.0001), and received oral anticoagulant prescription more frequently (78.6% vs. 63.0% vs. 55.6%, p=0.0001). NVAF-VHD was more likely to have previous stroke/systemic embolism (SE) than VHD or Non-VHD (14.5% vs. 23.5% vs. 19.6%, p=0.03). VAF or NVAF-VHD had larger left atrium than Non-VHD (50.5 vs. 47.2 vs. 42.4 mm, p<0.0001). Heart rate, diabetes mellitus and previous bleeding were comparable between the groups.

During the median follow-up of 1,471 days, the incidence rate of stroke/SE was not significantly different between three groups, however, NVAF-VHD showed modestly higher rate than Non-VHD (1.67 vs. 1.96 vs. 1.28 per 100 person-years, respectively, log rank p=0.054) (Figure). The incidence rates of all-cause death (4.62 vs. 5.74 vs. 3.21, p=0.0001), cardiac death (1.07 vs. 1.01 vs. 0.44, p=0.0003), and those of hospitalization for heart failure (3.29 vs. 4.41 vs. 1.80, p=0.0001) were higher in NVAF-VHD and VAF, than Non-VHD. After adjustment by relevant factors including the components of CHA2DS2-VASc score and oral anticoagulant use, NVAF-VHD, but not VAF, was an independent predictor for hospitalization for heart failure. Neither VAF nor NVAF-VHD was predictors for all-cause death, cardiac death or stroke/SE.

Conclusion: As compared with Non-VHD, the risk of stroke/SE in VAF and NVAF-VHD was not particularly high; although NVAF-VHD had modestly higher rate than Non-VHD. VAF and NVAF-VHD were associated with higher incidence rates of all-cause death, cardiac death and hospitalization for heart failure. NVAF-VHD was an independent predictor for hospitalization for heart failure in multivariate analysis.
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Figure. Incidence of stroke/SE

Log-rank test: p=0.054
HR 1.03, 95% CI: 0.54-1.75 (VAF vs Non-VHD)
HR 0.73, 95% CI: 0.38-1.31 (VAF vs NVAF-VHD)
HR 1.40, 95% CI: 1.06-1.84 (NVAF-VHD vs Non-VHD)

<table>
<thead>
<tr>
<th>Number at risk</th>
<th>Follow-up period</th>
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<tbody>
<tr>
<td>Non-VHD</td>
<td>2852 2544 2095 1750 1451 1066 808 384</td>
</tr>
<tr>
<td>NVAF-VHD</td>
<td>583   489 398 324 270 186 139 47</td>
</tr>
<tr>
<td>VAF</td>
<td>131   120 101 81 71 60 46 20</td>
</tr>
</tbody>
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