

three HATCH categories. After a mean follow-up of 474 ± 330 days, the recurrence rate were 36.4%, 38.7%, 34.3%, from HATCH=0 to HATCH ≥ 2 categories ($p=0.707$). Univariate analysis revealed that nonparoxysmal AF, left atrium size, body mass index were predictors of AF recurrence. Multivariate analysis revealed that nonparoxysmal AF (HR=1.43, 95% CI 1.03 to 1.99, $p=0.031$) was the only independent predictor of AF recurrence. HATCH and left atrium size were not independent predictors of AF recurrence.

Conclusion HATCH has no value in prediction of AF recurrence after catheter ablation.

e0571 EFFECT OF VAGAL NERVE ON THE MONOPHASIC ACTION POTENTIAL OF VENTRICULAR OUTFLOW TRACT

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Objective Vagal nerve may be related with idiopathic ventricular tachycardia (IVT). The present study was aimed to investigate the effect of vagal nerve on the monophasic action potential (MAP) of ventricular outflow tract.

Methods Eight adult mongrel dogs were involved. Bilateral vagosympathetic trunks were decentralised for stimulation. Metoprolol was given to block sympathetic effects. Three MAP recording electrode were placed at the left ventricular outflow tract (LVOT), right ventricular outflow tract (RVOT) and right ventricular apex (RVA) respectively through right femoral artery and vein. MAP was recorded at the LVOT, RVOT, RVA with or without vagal stimulation (VS) respectively.

Results MAP duration (MAPD) under VS was significantly shorter than baseline ($p>0.05$). With or without VS, the MAPD at RVA were significantly shorter than that at RVOT and LVOT ($p<0.05$), while there was no difference of MAPD between RVOT and LVOT. With VS, the abbreviation of MAPD at outflow tract was greater significantly than that at RVA (APD90 12.1 ± 3.9 at RVOT, 14.8 ± 5.5 at LVOT vs 8.3 ± 4.1 at RVA, $p<0.05$), while there was no difference of MAPD between LVOT and RVOT ($p>0.05$).

Conclusions VS could reduce MAPD significantly. With VS, the abbreviation of MAPD at outflow tract was greater significantly than that at RVA. It suggested that outflow tract may be sensible to vagal modulation, which might be related to the occurrence of IVT.

e0572 COMPARISON OF PULMONARY VEINS OSTIUM, ANTRUM AND LEFT ATRIAL VOLUME IN PATIENTS WITH AND WITHOUT PAROXYSMAL ATRIAL FIBRILLATION

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Objective To the date, catheter ablation basing on pulmonary vein (PVs) isolation is effective treatment for paroxysmal atrial fibrillation (PAF). In some experimental electrophysiological center, catheter ablation has been the first line for PAF. The aim of this study is to compare the variation of ostia, the antrum volume of pulmonary veins and the left atrial volume in patients with and without PAF.

Methods We consecutively enrolled 28 and 35 patients with and without PAF (PAF group and control group). All the patients were taken intravenous injection of contrast medium before evaluated by 16-slice CT (MSCT). The 3D reconstruction of PVs and left atrium was transformed into AW4.2 system, and calculated the variation of pulmonary veins by Cardiac IQ software. Diameters of PVs ostia were measured by virtual endoscopy. The antrum volume of PVs and the left atrium volume were calculated by volume rendering.

Results 3 patients (10.7%) with PAF had common ostia or trunk of PVs and right middle PVs, respectively. We compared the maximum

and minimum diameter of PVs ostia in PAF group with that in control group as follows: the maximum diameters, left superior PVs (22.69 ± 3.56 vs 18.69 ± 2.15 mm, $p<0.01$), left inferior PVs (18.40 ± 2.50 vs 16.96 ± 2.07 mm, $p<0.05$), right superior PVs (20.78 ± 3.46 vs 19.26 ± 2.55 mm, $p=0.08$), right inferior PVs (20.19 ± 4.39 vs 16.90 ± 1.75 mm, $p<0.01$); the minimum diameter, left superior PVs (16.18 ± 3.60 vs 11.12 ± 2.55 mm, $p<0.01$), left inferior PVs (11.1 ± 3.20 vs 10.40 ± 2.10 mm, $p<0.01$), right superior PVs (16.18 ± 2.57 vs 13.61 ± 2.35 mm, $p<0.01$), right inferior PVs (16.26 ± 3.16 vs 13.29 ± 2.20 mm, $p<0.01$). The atrium volume of the bilateral PVs in PAF group was significantly larger than that in the control group (left, 3.53 ± 0.74 vs 2.74 ± 0.49 cm³, $p<0.01$; right, 4.57 ± 1.59 vs 3.54 ± 1.01 cm³, $p<0.01$). The left atrial volume in PAF group was also significantly larger than that in control group (99.83 ± 15.68 vs 88.24 ± 18.21 cm³, $p<0.05$). The atrium volume of bilateral PVs justified with left atrial volume had no significant difference between the two groups.

Conclusion The ostial diameter and atrium volume of PVs were increased significantly, leading to the change for anatomy of atrial sleeves and distribution of autonomic nerve, and caused reentry or focal automaticity around PVs, which eventually initiated PAF. This study suggests that patients with PAF may exist potential structural disease of atria.

e0573 IMPACT OF AGEING ON THE LEFT ATRIUM THROMBUS IN PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION

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Objective This study sought to investigate the impact of ageing on left atrium thrombus in patients with non-valvular atrial fibrillation (AF).

Methods Four hundred and twenty-one consecutive patients with AF underwent transesophageal echocardiography prior to AF ablation were included in a prospectively established database. The elderly group was defined as age more than 65 years old.

Results In all the 421 patients, 108 (25.6%) were in the elderly group and 313 (74.4%) were in the young group, with the mean age 70.0 ± 3.7 , 52.1 ± 8.5 , respectively. There was no significant difference of left atrium thrombus between the elderly group and the young group (4.6% vs 6.7%, $p=0.439$). It was shown there is less value for age predicting left atrium thrombus, the area under the receptor-operating curve was 0.494. The mean age (56.7 ± 9.9 vs 56.7 ± 10.9 , $p=0.989$) and the proportion of the elderly (19.2% vs 26.1%, $p=0.439$) did not differ significantly between the patients with left atrium thrombus and those without. After adjustment for ejection fraction, heart failure, hypertension, diabetes mellitus, angiotensin-converting enzyme inhibitors/angiotensin receptor blockers medication in logistics multivariate analysis, left atrium diameter, non-paroxysmal AF, prior thromboembolic history were independent risk factors of left atrium thrombus. However, age was not an independent risk factor of left atrium thrombus.

Conclusions Ageing itself was not a risk factor of left atrium thrombus in patients with non-valvular AF.

e0574 HIGH-NORMAL THYROID FUNCTION AND RISK OF RECURRENCE OF ATRIAL FIBRILLATION AFTER CATHETER ABLATION

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Background It has been shown that serum free thyroxine (FT4) concentration is independently associated with atrial fibrillation (AF) even in euthyroid persons. This study aimed to testify the