

### Vagal Paroxysmal Atrial Fibrillation: Prevalence and Ablation Outcome in Patients without Structural Heart Disease.

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**Introduction:** the prevalence of vagal and adrenergic atrial fibrillation (AF) and the success rate of pulmonary vein isolation are not well defined. We investigated the prevalence of vagal and adrenergic AF and the ablation success rate of antral pulmonary vein isolation (APVI) in patients with these triggers compared to patients with random AF.

**Methods and Results:** 209 consecutive patients underwent APVI due to symptomatic drug refractory paroxysmal AF. Patients were diagnosed as vagal or adrenergic AF if >90% of AF episodes were related to vagal or adrenergic triggers. Otherwise a diagnosis of random AF was made. Clinical, ECG and Holter follow up was every 3 months in the first year and every 6 months afterward and for symptoms. Of 209 patients, 57 (27%) had vagal AF, 14 (7%) adrenergic AF and 138 (66%) random AF. Vagal triggers were sleep (96.4%), post-prandial (96.4%), late post-exercise (51%), cold stimulus (20%), coughing (7%) and swallowing (2%)(fig.2). At APVI 94.3% of patients had isolation of all veins. Twenty five (12%) patients had a second APVI. At a follow up of 21±15 months, the percentage of patients free of AF was 75% in the vagal group, 86% in the adrenergic group and 82% for random AF (p=0.51)(fig.1 and table.1).

**Conclusion:** in patients with PAF and no structural heart disease referred for APVI, vagal AF is present in approximately one quarter. APVI is equally effective in patients with vagal AF as in adrenergic and random AF.

fig1: success rate in Vagal AF vs non-Vagal AF (P=0.33)

Fig.2: distribution of vagal triggers

**TABLE I**  
Clinical Characteristics and Outcome of patients with vagal, Adrenergic, and Random AF

	Vagal AF	Adrenergic AF	Random AF	P value
Number (%)	57 (27)	14 (7)	138 (66)	
Mean age (years)	58 ± 10	57 ± 10	56 ± 10	0.69
Gender (male/female)	43/14	13/1	104/34	0.33
Hypertension (%)	13 (22.8)	3 (21.4)	40 (29.0)	0.61
Left atrium size (cm)	4.1 ± 0.7	3.9 ± 0.4	4.1 ± 0.6	0.82
Mean duration of AF (months)	112 ± 81	120 ± 100	100 ± 62	0.68
Number of AAD (n)	1.5 ± 0.7	1.2 ± 0.6	1.5 ± 0.7	0.34
Patients requiring second procedure (%)	7 (12)	1 (7)	17 (12)	0.85
Number of procedures (n)	1.2 ± 0.4	1.1 ± 0.3	1.2 ± 0.4	0.81
Mean follow-up (months)	21 ± 15	21 ± 13	22 ± 15	0.92
Freedom from AF (%)	43 (75)	12 (86)	113 (82)	0.51
Freedom from AF on AAD (%)	12 (21.9)	2 (16.7)	34 (30.1)	0.62

