significantly different between the groups (AF 6.3 ± 3.9 vs non-AF 6.2 ± 3.4% N.S.).

Conclusion: We concluded that the reduced TM expression on atrial endocardium may also contribute to the atrial thrombus formation in patients with AF.

1130-72 Endothelial Dysfunction and Platelet Activation in Patient With Chronic Atrial Fibrillation: Interactions Leading to Thrombogenesis?

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Background: Atrial fibrillation is a common arrthymia which is associated with stroke and thromboembolism. Recent studies have suggested that atrial fibrillation confers a hypercoagulable state. However, the thrombotic tendency of blood is influenced by many factors including interactions between endothelial cells and platelets.

Methods: We performed a cross-sectional study of indices of platelet and endothelial cell function in 42 patients (31 males, mean age = 71) with chronic atrial fibrillation and compared them with 42 age- and sex-matched controls. We measured the platelet activation marker soluble P-selectin (s-Psel) (ng/mL) and endothelial markers soluble thrombomodulin (sTM) (ng/mL) and von Willebrand factor (vWF) (IU/dL) by ELISA methods.

Results:

	vWF (Mean ± SD)	sP-sel (Median + range)	sTM (Mean ± SD)
Patients	133 ± 26	225 (152–395)	54 ± 18
Control	104 ± 32	205 (22–390)	46 ± 16
P value	<0.01	0.48	0.05

Conclusion: This study suggests the presence of endothelial dysfunction in patients with atrial fibrillation, as indicated by significant elevation of van Willebrand factor levels, although the elevation in soluble thrombomodulin was only of borderline significance. There was no significant increase in soluble P-selectin, although previous studies have indicated high platelet activation in this condition. Further studies exploring the interaction between platelets and the endothelium are needed, as the presence of endothelial dysfunction in atrial fibrillation may contribute to the high risk of stroke and thromboembolism in this condition.

1130-73 Left Ventricular Smoke: An Echocardiographic Study

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Smoke is commonly seen during TEE in the left atrium of pts with AFib (severe atrial dysfunction) and is associated with thromboembolism. The incidence and correlates of LV smoke are unknown. Embolic events are common in pts with congestive heart failure with an annual incidence of 2–3%. Transthoracic echocardiography (TTE) using 2–3.5 MHz transducers rarely permits visualization of LV smoke. Higher frequency transducers may permit visualization of LV smoke. We evaluated the ability of a high frequency 5 MHz transducer to detect LV smoke in 710 consecutive pts who underwent TTE. We compared the 58 pts with smoke (SEC+) to the 652 pts without smoke (SEC−) with respect to LV systolic function, 1) ejection fraction (EF) and LV diastolic function 2) transmitral E/A ratio 3) deceleration time (msec) (DT), 4) pulmonary vein systolic/diastolic ratio (S/D), 4) LV diastolic dimensions (cm) (LVID), and the incidence of thrombi. 58 pts (8%) had LV smoke.

	Age	EF%	LVID (cm)	DT (msec)	Thrombi
SEC+	63.6	37.8	5.6	178.3	3.4%
SEC−	61.0	55.9	5.0	217.3	0
p	<0.001	<0.001	0.003	0.004	0.2

Pts with smoke have greater systolic and diastolic dysfunction as manifested by lower ejection fractions, larger internal diameters, greater E/A and lower S/D than those without smoke. No significant difference in the incidence of thrombi was noted.

Conclusion: The clinical significance of LV smoke, its association with embolic events (as in AFib), and the potential benefit of anticoagulants in pts with CHF and LV smoke needs to be determined.

1130-74 Transesophageal Echocardiography Considerably Impacts the Management of Patients With Stroke, Transient Ischemic Attack or Peripheral Embolism

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The impact of transesophageal echocardiography (TEE) on the management of pts with potential embolic events, such as non- hemorraghic stroke (CVA), transient ischemic attack (TIA) or peripheral embolism is controversial.

Methods: Thus, 155 consecutive pts (mean age 61 ± 14 yrs; 102 M/53 F) undergoing TEE for work-up of CVA (n = 90) TIA (n = 37) or PE (n = 28) were enrolled. Medical charts were reviewed to determine the influence of TEE results on treatment and further in-hospital work-up. TEE was assessed for the presence of intracardiac thrombus, spontaneous echo contrast (SEC), septal defect, left-sided vegetation, aortic plaque (≥5 mm or mobile), patent foramen ovale (grade ≥ 2) and valvular fibrin strands.

Results: TEE was diagnostic of a potential embolic source in 57% (n = 89) of the entire study population and in 58% (n = 52) of the CVA, 57% (n = 21) of the TIA and 51% (n = 16) of the PE group (p = ns). TEE results changed medication (n = 44) or surgical (n = 1) treatment in 29% (n = 45) and altered planned diagnostic studies in 15% (n = 24) of patients. Anticoagulation with warfarin was started in 14% (n = 21) on the basis of TEE findings of intracardiac thrombus (n = 17), dense left atrial SEC (n = 2), widely patent foramen ovale membrane (n = 1) or numerous fibrin strands (n = 1). Aspirin was started in 9% (n = 14) for fibrin strands. In 5% (n = 7) antibiotics were started on the basis of TEE findings of left-sided vegetation and subsequent positive blood cultures (n = 5). There were no significant differences in the change in treatment or work-up among the stroke, transient ischemic attack or peripheral embolism groups. In 72% (112/155) of pts, TEE findings of thrombus, SEC or right-to-left shunt confirmed as appropriate the empiric decision made prior to TEE, to anticoagulate (65%; 11/17) or not to anticoagulate (73%; 101/138) (p = 0.004).

Conclusions: These data are consistent with a significant impact of TEE on the clinical management of patients with potential embolic events. Future studies addressing the effectiveness of treatment, guided by TEE findings, in the prevention of recurrent embolic events are needed.

1130-75 Ticlopidine Activity on Spontaneous Echocontrast: A Transesophageal Echocardiographic Study

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Background: Spontaneous echocontrast (SEC) in the left atrium is deemed to be a risk factor for peripheral thromboembolism. It is possible that platelet aggregation can play a role in the genesis of SEC. Therefore, the aim of this study was to verify whether Ticlopidine (TIC), a powerful antiplatelet agent, could suppress or attenuate the SEC density in the left atrium.

Methods: For this purpose, a phase II clinical trial (two-stage design) was undertaken. In the first stage, 12 patients with non valvular atrial fibrillation and stable SEC density in the left atrium as assessed by transesophageal echocardiography (TEE), received Ticlopidine, 500 mg/day, for 2 weeks. At the end of the 14-day treatment a further TEE study was performed. Before TIC treatment was initiated, the stability of SEC density was determined by repeating the TEE evaluation after 14 days from the first TEE screening study. In each patient the gain setting, optimized in the first study, was kept unchanged in the further 2 studies. SEC density was scored by the consensus of two experienced observers, as being absent, mild, moderate or severe. The TEE-study reading was performed in a blinded manner.

Results: Ticlopidine was well tolerated. Before TIC, SEC density was scored as being mild in 7 cases (58%), moderate in 1 case (8%) and severe in 4 cases (33%). After TIC, the score remained unchanged, the response rate being zero. Therefore, Ticlopidine did not modify the SEC density in the left atrium at all in the first stage of the trial. For this reason, in accordance with the study design, the second stage was not undertaken.

Conclusion: In this phase II clinical trial, antiplatelet treatment, using Ticlopidine 500 mg/day, was ineffective in abolishing or in reducing the SEC density in the left atrium. Platelet aggregation, therefore, does not seem to play a role in the genesis of spontaneous echocontrast.

TUESDAY POSTER