

Heartbeat: Highlights from the issue

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In this issue of *Heart*, Drs Sekikawa and colleagues (*See page 569*) report a population based cohort study comparing coronary calcium scores and serum concentrations of long chain n-3 polyunsaturated fatty acids (n-3 PUFA) in Japanese and white men. Interestingly, not only did Japanese men have much higher serum levels of n-3 PUFA but they also had a lower rate of coronary calcification. Multivariate analysis considering standard risk factors supported an association

between serum n-3 PUFA levels and coronary calcification (see table 1).

In the accompanying editorial, Drs. Wu and Mozafferian (*See page 530*) review the data on the association between n-3 PUFA and cardiovascular events, pointing out that findings in the literature have been mixed and that recent clinical trials have not demonstrated a significant benefit for n-3 PUFA supplementation. In addition, there may be other differences between Japanese men in Japan and white men in the USA that might explain the observed lower prevalence of coronary calcification. However, n-3 PUFA has known physiologic benefits and observational studies have shown that that moderate intake of dietary n-3 PUFA is associated with a lower risk of cardiac death. Further studies are needed but, in the meanwhile, the authors conclude that moderate dietary intake of fatty fish should continue to be part of a heart-healthy diet.

Other articles in this issue focus on anticoagulation in patients with atrial fibrillation. Dr. Abdul-Rahim and colleagues (*See page 557*) found that anticoagulation is significantly underused in high risk populations based on a cross-sectional analysis of a city wide Glasgow primary care database. Given the importance of atrial fibrillation as a cause of stroke, the authors conclude that better strategies for

ensuring patients receive appropriate anticoagulation are needed (see figure 1).

Optimization of antithrombotic therapy for atrial fibrillation based on transesophageal echocardiography is proposed by Dr. Dinh and colleagues (*See page 563*). In this small clinical trial, patients with no evidence of atrial stasis or complex aortic plaques were randomized to aspirin versus vitamin K antagonist anticoagulation. The hypothesis that aspirin therapy might be appropriate in this patient subgroup will require further studies for verification.

The Education in Heart article (*See page 590*) also looks at atrial fibrillation with a discussion of the role of cardiac MRI imaging in evaluation of fibrosis of the atrial wall, particularly the correlation between atrial structural remodeling and stroke risk in atrial fibrillation patients.

Challenge your ECG reading skills in a case with alternating QRS morphologies (*See page 596*); a rare variant with an interesting electrophysiological explanation.



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Table 1 Incidence rate ratio of coronary artery calcification between Japanese and white subjects

	Incidence rate ratio (95% CI)	p Value
Unadjusted model	0.321 (0.150 to 0.690)	<0.01
Model I	0.262 (0.094 to 0.731)	0.01
Model II	0.376 (0.090 to 1.572)	0.18

Unadjusted model took the follow-up time into account.
Model I: adjusted for age, systolic blood pressure, LDL-C, HDL-C, triglycerides, body mass index, diabetes, pack-years of smoking, and medication for hypertension.
Model II: further adjusted for total LCn3PUFAs in addition to model I.
HDL-C, high density lipoprotein cholesterol;
LCn3PUFA, long-chain n-3 polyunsaturated fatty acid;
LDL-C, low density lipoprotein cholesterol.

Figure 1 Proportion of patients treated with VKA, antiplatelet, combination or no treatment at various levels of stroke risk. Data are proportion of patients (expressed as percentage of total patients) at each level of CHA₂DS₂VAS_C score from 2 to 9. VKA, vitamin K antagonist.

