In more general terms, we certainly agree with Dr Martinez-Sellez that coronary vaso-
ospass does exist, and it is a pivotal, often clinically unrecognized, mechanism under-
lying virtually all forms of ischaemic heart disease, from stable angina to unstable
angina to acute myocardial infarction and sudden death. The landmark studies of coronary vaso-
spasm were performed in the Institute of Clinical Physiology by Professor
Attilio Maseri in the seventies. After 30 years, we certainly did not forget the
Maseri lesson, and we agree with Martinez-
Sellez that the single most important factor
affecting the frequency with which variant
angina is recognized depends on the phys-
ician’s awareness of its existence. However,
it is also true that it is not enough to be
aware of coronary vasospasm to detect it.
The occasional occurrence of coronary
vasospasm during dipyridamole infusion and
the absence of clear-cut signs of coronary
spasm exclude, at least in our patient
population, a significant role of coronary
vasospasm in the prognostic power of strati-
fication of a positive stress echo with normal
 coronary arteries.

References
1. Picano E, Lattanzi F, Masini M, Distante A,
L’Abbate A. Aminophylline termination of dipy-
ridamole stress as a trigger of coronary vasos-
pasm in variant angina. Am J Cardiol 1988;
2. Fujita H, Yamabe H, Yokoyama M. Dipyridamole-
induced reversible thallium-201 defect in patients with vasospastic angina and nearly
normal coronary arteries. Clin Cardiol 2000;
3. Picano E, Palinkas A, Amyot R. Diagnosis of
myocardial ischemia in hypertensive patients.
4. Dimitrov PP, Galdersi M, Rigo F. The non-
invasive documentation of coronary microcir-
culation impairment: role of transthoracic
echocardiography. Cardiovasc Ultrasound
5. Maseri A, L’Abbate A, Baroldi G, Chierchia S,
Marzilli M, Ballestra AM, Severi S, Parodi O,
Biagini A, Distante A, Pesola A. Coronary vaso-
spasm during dipyridamole stress as a trigger of coronary vasos-
pasm in variant angina. Am J Cardiol 1988;

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New evidence of anti-inflammatory interventions in atrial fibrillation

We read with great interest the recent elegant review of Boos et al.,1 which presents an overview of the evidence of inflammation and anti-
flammatory therapies in atrial fibrillation (AF). We agree with the reviewers that some
 drugs which have anti-inflammatory character-
sistics, such as ACE-inhibitors, ARBs, statins,
stereoids, fish oils, and vitamin C, might be
useful in the management of AF.2–3 In addition,
we would like to add some new evidence of
anti-inflammatory interventions in AF.

Recently, another two studies evaluated
the role of statins in the prevention and treat-
ment of AF. Marin et al.4 studied 234 consecu-
tive patients who underwent coronary artery
bypass grafting (CABG) and observed that
statin use was significantly associated with a
decreased incidence of post-operative AF
and increased TIMP1/MMP1 ratio. In a single-blind prospective study, Dernellis
et al.5 randomized 80 patients with paroxysmal
AF to atorvastatin or placebo. After 4–6
months of therapy, treatment group exhib-
it a highly significant reduction in paroxys-
mal AF and C-reactive protein levels.
However, in a recent post hoc analysis of a
large randomized clinical trial, MIRACL
study,6 intensive statin treatment did not
appear to prevent new AF in the 16 weeks
following acute coronary syndrome.
Therefore, more randomized trials of statins
in patients with AF may be warranted.

Another two promising anti-inflammatory
therapies have also achieved positive
results in the setting of post-operative AF.
Merritt et al.7 demonstrated that carvedilol,
a new β-blocking agent which has anti-
oxidant properties, significantly reduced
post-operative AF when compared with
metoprolol or atenolol. Furthermore, a
randomized open label trial performed by
Cheruku et al.8 also showed that non-ster-
oidal anti-inflammatory medications signifi-
cantly reduced the incidence of AF and
shortened the length of hospitalization after
CABG. Therefore, inflammation may be
a new therapeutic target in the manage-
ment of AF. More studies of anti-

inflammatory interventions are needed to
clarify this important issue.

References
1. Boos CJ, Anderson RA, Lip GY. Is atrial fibrilla-
tion an inflammatory disorder? Eur Heart J
2. Liu T, Li G. Anti-inflammatory effects of long-
chain (omega)-3 fatty acids: potential benefits
for atrial fibrillation. Med Hypotheses
3. Liu T, Li GP, Huang TG. Anti-inflammatory the-
rapies in atrial fibrillation. Int J Cardiol
4. Marin F, Pascual DA, Roldan V, Arribas JM,
Ahumada M, Torneil PL, Oliver C, Gomez-Plana
J, LIP GHY, Valdes M. Statins and postoperative
risk of atrial fibrillation following coronary artery
bypass grafting. Am J Cardiol 2005; doi:
5. Dernellis J, Panaretou M. Effect of C-reactive
protein reduction on paroxysmal atrial fibrillation.
6. Schwartz GG, Olsson AG, Chaitman B,
Goldberger JJ, Szarek M, Sasiela WJ. Effect of
anti-inflammatory therapy in atrial fibrillation
afteacute; acute coronary syndrome: an analysis of the
7. Merritt JC, Niebauer M, Tarkaki K, Hamer D,
Wills RM. Comparison of effectiveness of carve-
dilol versus metoprolol or atenolol for atrial
fibrillation appearing after coronary artery
bypass grafting or cardiac valve operation.
Am J Cardiol 2003;92:735–736.
8. Cheruku KK, Ghani A, Ahmad F, Pappas P,
Silverman PR, Zelinger A, Silver MA. Efficacy
of nonsteroidal anti-inflammatory medications
for prevention of atrial fibrillation following
coronary artery bypass graft surgery. Prev
Cardiol 2004;7:13–18.

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