difference in outcome is mainly dependent on the level of PR inhibition achieved. In this trial, patients above 75 years old did not benefit from prasugrel despite a reduction in ischemic events because of a marked increased in bleedings. Therefore strategies to optimize anti-platelet therapy are warranted in this particular subpopulation which has both a high ischemic and bleeding risk. Bleeding is a growing concern because recent studies demonstrated that they have a similar prognostic impact compared to thrombotic events [8]. According to the literature PR could be used as a surrogate endpoint for ischemic and bleeding events. Several investigators have shown that good responders to clopidogrel have a low risk of ischemic events. In addition recent data support the beneficial impact of intensified therapy in HTPR patients [9]. The present study suggests that the level of platelet reactivity may be optimized in elderly patients without extra-bleedings using a repeat clopidogrel loading dose in those exhibiting HTPR after 600 mg of clopidogrel. In addition, few patients reached a high level of PR inhibition which could be associated with bleeding despite such a "high" dose of clopidogrel. The present results provide the rationale for a large clinical trial to confirm the clinical benefit of such strategy.

The authors of this manuscript have certified that they comply with the Principles of Ethical Publishing in the International Journal of Cardiology.

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High endogenous adenosine plasma concentration is associated with atrial fibrillation during cardiac surgery with cardiopulmonary bypass

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Post-operative atrial fibrillation (AF) is a common complication after cardiac surgery [1], which impacts short and long term mortality [2]. Hypoxia is known to increase AF risk [3]. Adenosine may be implicated in AF [4]. It is a ubiquitous nucleoside that acts on the cardio-vascular system via four membrane receptors namely A_1, A_{2A}, A_{2B}, and A_3 subtypes. Adenosine is a sensitive marker of hypoxia which is strongly released during cardiopulmonary bypass (CBP) [5].

Table 1
Characteristics of patients included (n = 37).

	AF group (n = 12)	Non AF group (n = 25)	p
Age ± SD (years)	74 ± 9	65 ± 13	0.024
Sex ratio (F/M)	6/12	5/20	NS
BMI (kg/m^2)	24 ± 4	25 ± 4	NS
Euroscore	6 ± 2	5 ± 2	0.059
Coronaropathy, n (%)	2 (17)	9 (36)	NS
Tobacco (n%)	3 (25)	10 (40)	NS
Diabetes n (%)	2 (17)	7 (28)	NS
Preoperative PaO_2 (mm Hg)	79 ± 10	87 ± 11	NS
Creatinine clearance (mL/min)	67 ± 32	84 ± 32	0.057
Preoperative LVEF (%)	57 ± 12	57 ± 11	NS
Preoperative Systolic PAP (mm Hg)	38 ± 16	29 ± 8	0.006
CPB duration (min)	86 ± 27	91 ± 31	NS
Aorta clamping duration (min)	60 ± 24	64 ± 24	NS
Need vasopressor drugs; n (%)	3 (25)	6 (24)	NS
Mechanic ventilation duration (h)	7 ± 7	4 ± 1	NS
ICU stay (days)	2.6 ± 1.1	2.5 ± 0.9	NS

Data are expressed as means ± standard deviation.
AF group = group of patients presenting postoperative atrial fibrillation.
Non AF group = group of patients who remained in a sinus rhythm during the postoperative period.
BMI: body mass index (kg/m^2).
LVEF: left ventricular ejection fraction.
PAP: pulmonary arterial pressure.
CPB: cardiopulmonary bypass.

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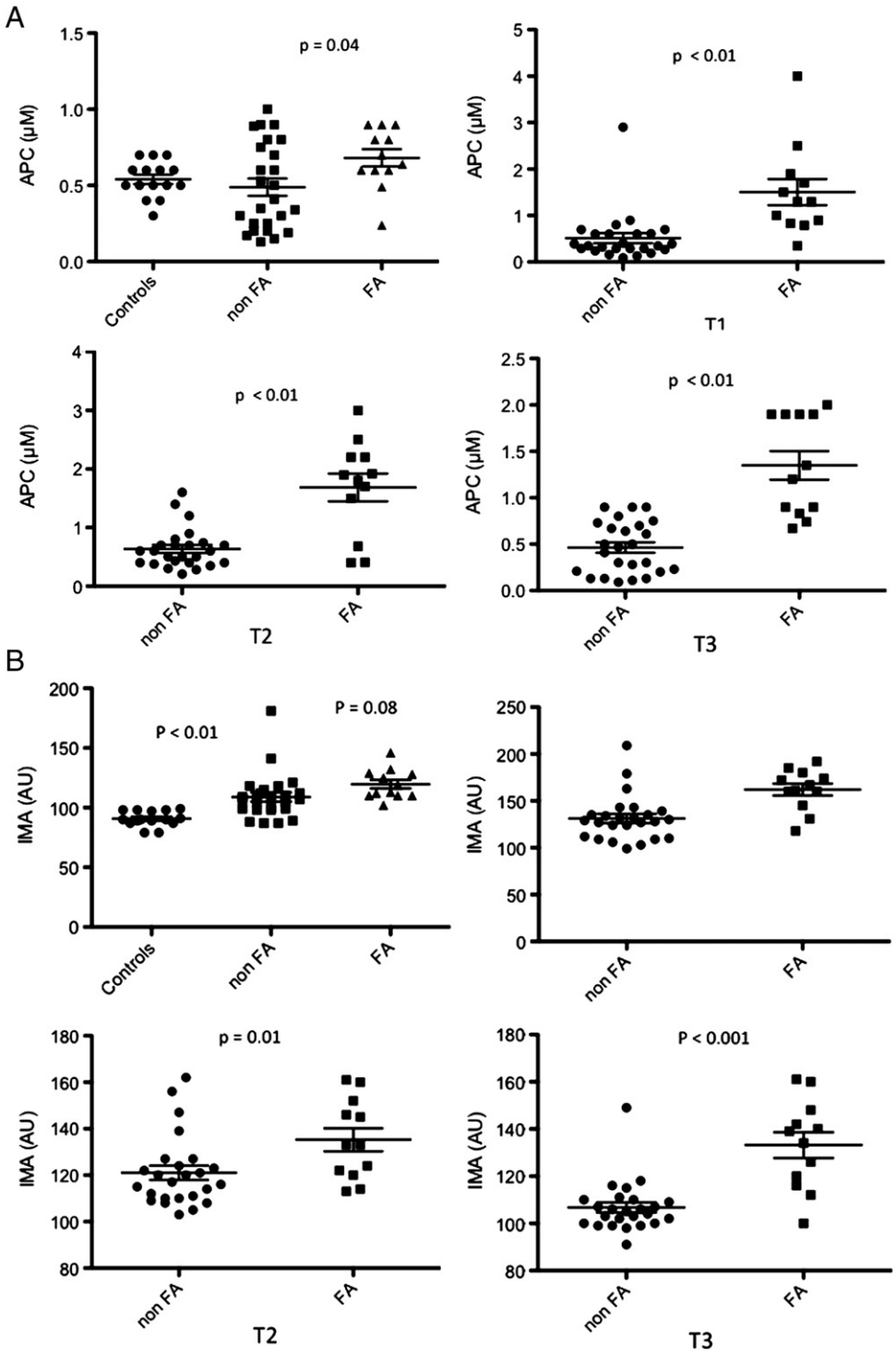

Fig. 1. Adenosine plasma concentration (APC, A) and ischaemia modified albumin (IMA, B) evaluated at baseline (TO, beginning of cardiopulmonary bypass), at T1 (end of CBP), T2 (the morning following surgery), and T3, 24 h later. AF: atrial fibrillation (n = 12); non FA patients without AF (n = 25). Data are expressed as means and SD. Mann–Whitney *U* test was used for APC or IMA levels comparisons.

The aim of this clinical prospective study was to measure adenosine plasma concentration (APC) during cardiac surgery with CBP and to determine whether high APC is linked to AF occurrence. We also determined ischemia-modified albumin (IMA), which is a sensitive and early marker of hypoxia and oxidative stress during cardiac surgery [5].

The study was performed in accordance with the principles of Ethical Publishing in the International Journal of Cardiology. Thirty seven adult patients, in sinus rhythm, with no active inflammatory disease or pulmonary hypertension, who were undergoing valvular replacement were prospectively and consecutively included. Patients were observed 6 weeks after the operation. Controls for APC and IMA levels were healthy subjects, without treatment, from the medical staff (n = 15; 8 men and 7 women, mean age 58 ± 7 years). Anesthesia and CBP procedure have been previously described [5].

All patients underwent continuous electrocardiographic monitoring through intensive care unit exit. The time of atrial fibrillation onset was