De-escalation versus escalation of antiplatelet therapy in elderly ACS patients: insight from the ANTARCTIC trial.

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For the **ACTION study group**

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- ❑ **I have the following potential conflicts of interest to report:**

Receipt of honoraria or consultation fees: Abbott, AstraZeneca, Bayer AG, Biotronik, Boston Scientific, Daiichi Sankyo and Eli-Lilly , Medtronic, MSD, Pfizer, The Medecine Company

Background

In elderly patients stented for an ACS, ANTARCTIC study (1) failed to improve the net clinical benefit of a strategy **of platelet function monitoring** with **dose and drug adjustment** as compared with a conventional strategy using the same 5mg dose of prasugrel in all patients.

The ANTARCTIC study offers the opportunity to **analyze the biological impact of escalation or de-escalation of antiplatelet agents in elderly patients**.

(1) ANTARCTIC , *Cayla et al.* Lancet 2016

Methods

Among the **877 patients randomized : 435** were allocated to the **monitoring strategy**

- Verifynow 14 days after initiation of prasugrel 5mg
- Verifynow repeated 14 days later in patients who required a change in treatment.

The optimal range of platelet reactivity was defined as PRU between 208 and 85.

High Platelet Inhibition (HPI) PRU ≤85

prasugrel 5mg

↓ **De-escalation**

clopidogrel 75mg

High Platelet Reactivity (HPR) PRU ≥208

prasugrel 5mg

↓ **Escalation**

prasugrel 10mg

High Platelet Inhibition (PRU ≤ 85)

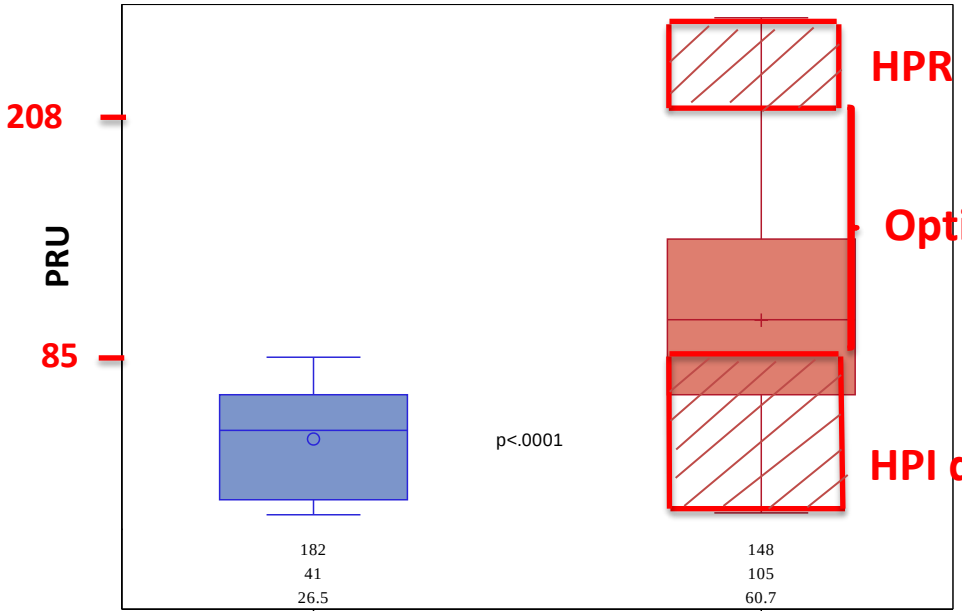
Observed in 182 patients (42 % of the monitoring group)

Factors independently associated with HPI were

- Body Mass Index ; Adj OR: 0.91 (95% CI 0.87-0.96), p<0.001
- Hemoglobin Level (unit 1 g/dl) ; Adj OR: 1.33 (95% CI 1.15-1.53), p<0.0001
- Unstable Angina ; Adj OR: 0.51 (95%CI 0.29-0.88), p=0.016

De-escalation (first Adjustment)

Mean PRU= 41



HPR despite De-escalation: 4 %

Optimal range : 59 %

HPI despite De-escalation: 37%

Prasugrel 5 mg → Clopidogrel 75 mg

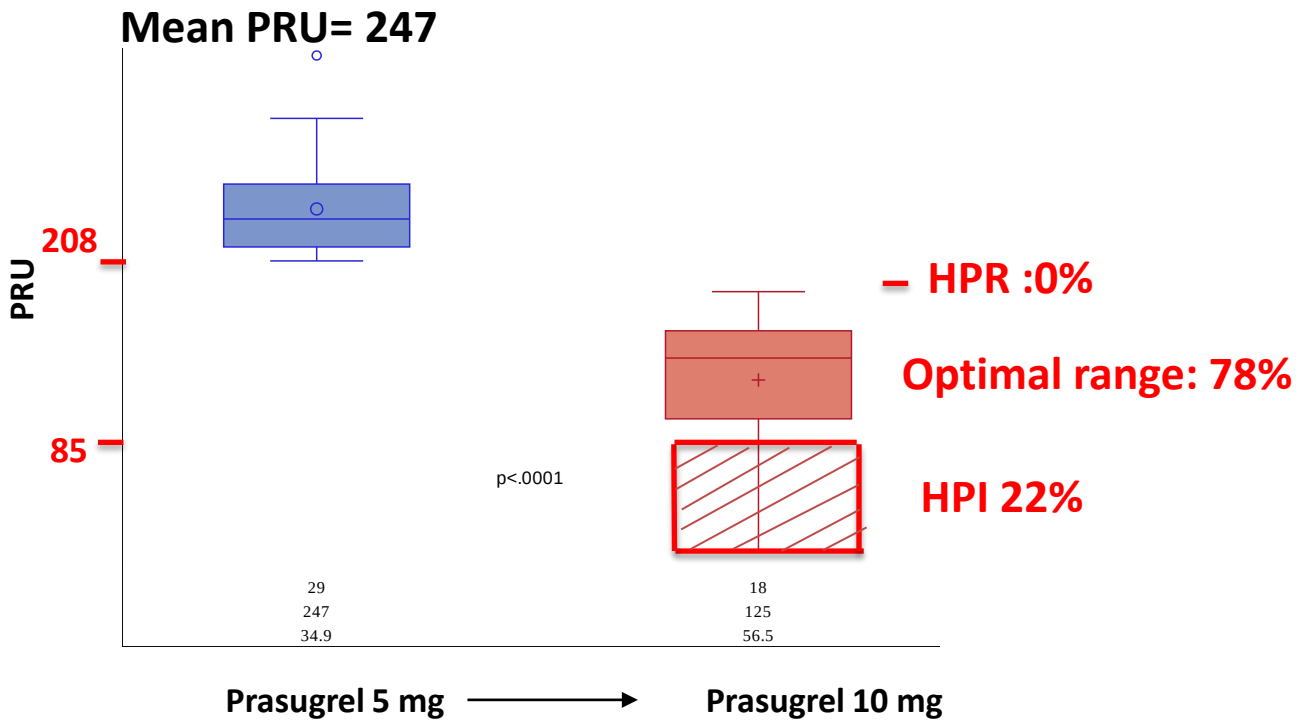
High Platelet Reactivity (PRU ≥ 208)

Observed in 29 patients (6.4 % of the monitoring group)

Factors independently associated with HPR were

- Peripherical vascular disease ; Adj OR: 3.3 (95% CI 1.18-9.21), p=0.03
- History of prior cancer ; Adj OR: 5.68 (95% CI 2.21-14.63), p=0.0003
- Hemoglobin level (unit 1 g/dl) ; Adj OR 0.56 (95% CI 0.42-0.74), p<0.0001

Escalation (first Adjustment)



Conclusion

In elderly patients stented for an ACS on prasugrel 5 mg, a strategy of platelet function monitoring led after final adjustment to

- **de-escalation in 42 % after the first test and 39%** (171/435) **after the final test**
- **escalation in 6 % after the first test and 4 %** (n=16/435) after the final test

PFT increased the number of patients in the optimal range of platelet inhibition (85<PRU<208) from Test 1**:** 182 **(42%)** to **final test**: 287 **(66%)**

However, this strategy had no impact **on clinical outcomes**