**PREDICTORS OF HIGH ON-ASPIRIN PLATELET REACTIVITY IN CHINESE ELDERLY PATIENTS**

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**Objectives:** Insufficient inhibition of platelet activation in patients on regular aspirin treatment, namely high on-aspirin platelet reactivity (HAPR), has been reported relating to increasing thrombotic risks. The aim of our study was to investigate relative risk factors of HAPR in Chinese elderly patients.

**Methods:** Elderly patients on regular aspirin treatment were enrolled from 19 hospitals in China from September 2017 to December 2017. Medical records of each patient were collected, including demographic information, cardiovascular risk factors, concomitant drugs and routine
biological parameters. Arachidonic acid (AA, 0.5 mg/mL) induced platelet aggregation were measured via light transmission assay (LTA) to evaluate antiplatelet responses, referred as LTA-AA.
**Results:**A total of 1194 elderly patients were enrolled,1014 of them were qualified according to inclusion/exclusion criteria. The mean age of these 1014 patients was 67.18±6.497 years, and females accounted for 55.4%. HAPR was defined as LTA-AA in the upper quartile of the qualified population. HAPR patients tended to have higher serum uric acid (SUA) (P=0.001) and creatinine (P=0.025) . Multivariate analysis revealed that SUA (OR: 1.003, 95% CI: 1.002-1.005, P=0.001), leukocyte count (OR: 0.880, 95% CI:0.792-0.978, P=0.018), concomitant calcium channel blockers (CCB) use (OR: 0.672, 95% CI: 0.489-0.923, P=0.014), angiotensin receptor antagonist (ARB) use (OR: 1.920, 95% CI: 1.345-2.741, P=0.001) and proton pump inhibitors (PPI) use (OR: 3.705, 95% CI: 1.014-13.546, P=0.048) were correlated with HAPR. Spearman’s correlation analysis demonstrated an negative correlation of LTA-AA with CCB (r=-0.074, P=0.018) and positive correlation with ARB (r=0.130, P=0.001), PPI (r=0.081, P=0.01) and SUA (r=0.076, P=0.015).
**Conclusion:**In Chinese elderly patients, CCB, ARB, PPI and SUA were independently correlated with HAPR. These parameters might provide novel therapeutic targets for optimizing antiplatelet therapy.