

# Gastroprotection during long-term dual antiplatelet therapy: to give or not to give?

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Dear Editor,

We read with interest Kim J, *et al.* titled “Potentially inappropriate prescribing of cardiovascular system and antiplatelet/anticoagulant drugs among elderly patients: a Korean population-based national study”<sup>[1]</sup> highlighting that the more frequent potentially inappropriate prescribing was, in elderly subjects, the non-steroidal anti-inflammatory drug with concurrent antiplatelet agent without proton-pump inhibitor prophylaxis (PPI).

To note that this issue is very important also in case of long-term dual antiplatelet therapy (DAPT) because: (1) to prevent ulcer and bleeding, concomitant PPI treatment is often prescribed in these subjects;<sup>[2]</sup> (2) pharmacodynamic and pharmacokinetic studies suggested an interaction through hepatic CYP2C19 between PPIs and clopidogrel, which could translate into clinical inefficacy, leading to higher rates of cardiovascular events;<sup>[2]</sup> (3) chronic PPI therapy, as increasing age, female sex, smoking or alcohol exposure, and use of other medications as nonsteroidal anti-inflammatory drugs, selective serotonin reuptake inhibitors and statin, increase the risk of microscopic colitis;<sup>[3,4]</sup> and (4) microscopic colitis lead to microbiota perturbation and mucosal dysfunction.<sup>[5]</sup>

Nowadays, in the best clinical practice, PPIs in combination with antiplatelet treatment are recommended in patients with risk factors for gastrointestinal bleeding as including advanced age, concurrent use of anticoagulants, steroids or non-steroidal anti-inflammatory drugs, and *Helicobacter pylori* infection,<sup>[2]</sup> and this concomitant therapy could lead a role of intestinal injury caused by long-term DAPT secondary to translocation of intestinal bacteria into blood circulation.<sup>[6]</sup>

On the other hands, in patients hospitalized for acute myocardial infraction, PPI could become an available choice because PPI, in combination with clopidogrel, was associated with decreased risk for major adverse cardiovascular/cerebrovascular events and it might have a trend to mitigate gastrointestinal bleeding severity.<sup>[7]</sup>

Therefore, a deeper evaluation of these aspects could be very useful to better define the safety profile of DAPT and a particular attention to drug-drug interactions avoiding unnecessary association between PPI and antiplatelet agents to improve the patients’ safety.

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