

PPI THERAPY

Clopidogrel–PPI drug interaction may not be a class effect

A potential adverse drug interaction between PPIs and the antiplatelet drug clopidogrel has been the subject of a lot of discussion and controversy. PPIs have been reported to reduce the antiplatelet efficacy of clopidogrel resulting in an increased risk of adverse cardiovascular events. New evidence suggests that this association is not a class effect of PPIs, as omeprazole, but not pantoprazole, has been shown to have a significant pharmacodynamic reaction with clopidogrel.

PPI therapy is usually prescribed concomitantly with clopidogrel to reduce the risk of gastrointestinal bleeding caused by the antiplatelet drug. All patients who have experienced a myocardial infarction or have undergone coronary angioplasty receive such therapy. Ricardo Fontes-Carvalho and colleagues decided to perform a prospective, randomized, crossover study to evaluate the effects of two different PPIs (omeprazole and

pantoprazole) in 34 patients with acute myocardial infarction who were taking dual antiplatelet therapy (aspirin and clopidogrel). Omeprazole was found to significantly reduce the antiplatelet efficacy of clopidogrel and to increase the proportion of patients not responding to therapy; however, these findings were not apparent for pantoprazole. This PPI therefore seems to be the better choice for the prophylaxis of gastrointestinal bleeding in patients on antiplatelet therapy.

“These findings have important clinical implications”, says Fontes-Carvalho. “Concomitant use of omeprazole should be avoided in patients on clopidogrel to limit the risk of reduced treatment efficacy and future cardiovascular events. Pantoprazole seems to be the safest alternative.” He adds that “future clinical trials assessing such interactions should analyze PPIs individually rather than as a homogenous class.” The team hope to



continue their work by evaluating the effects of other PPIs.

Rachel Thompson

Original article Fontes-Carvalho, R. *et al.* Omeprazole, but not pantoprazole, reduces the antiplatelet effect of clopidogrel: a randomized clinical crossover trial in patients after myocardial infarction evaluating the clopidogrel–PPIs drug interaction. *Eur. J. Gastroenterol. Hepatol.* **23**, 396–404 (2011)