**PWE-169**

**PROTON PUMP INHIBITORS AND CLOPIDOGREL COMBINATION: IS THERE ANY RISK?**

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**Introduction** Dual anti-platelet therapy (DAT) with aspirin and clopidogrel is prescribed up to 1 year following Acute Coronary Syndrome (ACS). Proton Pump Inhibitors (PPIs) are often used in selective patients to reduce the risk of gastrointestinal (GI) bleeding. Some studies have suggested that there is a possible interaction between PPIs and clopidogrel resulting in an adverse cardiac event rate. Main objective of this study was to determine if prescription of PPIs in ACS patients on dual anti-platelet therapy results in increased cardiac events compared to patients not receiving PPIs.

**Methods** A retrospective observational, comparative study of 200 admissions with ST elevation myocardial infarctions (STEMIs) and non-ST elevation myocardial infarction (nSTEMIs) over a period of 1 year. Patients were divided in two groups: PPI group (Patients on DAT and PPIs) and Non-PPI group (Patients on DAT only). End points were readmissions with ACS or death.

**Results** Mean age was 67 (24–96), 65% male and 35% female, 75% Caucasian and 25% Asians. 27 patients were excluded (24 patients not receiving DAT, 3 patients on H2 antagonist). For PPI group (54% on lansoprazole, 36% on pantoprazole and 11% on omeprazole), baseline characteristics were (Patient number—89, 27-STEMIs, 62-nSTEMIs, mean age—69) whereas the corresponding values for non-PPI group were (Patient number—84, 58-STEMIs, 46-nSTEMIs, mean age—63). Mean GRACE score at admission (predictor of death or MI in 6 months) was 29% for PPI group whereas the corresponding value for the non-PPI group was 27% (p=0.075). 26 patients were re-admitted with ACS, 20 in PPI group and six in non-PPI group (OR 3.77, 95% CI 0.43 to 33.09, p=0.075). 26 patients were re-admitted with ACS, 20 in PPI group and six in non-PPI group (OR 3.76, 95% CI 1.43 to 9.92, z statistic 2.68, p=0.007). Five deaths due to ACS were observed, four in PPI group and one in non-PPI group (RR 3.77, 95% CI 0.43 to 33.09, p=0.02).

**Conclusion** This study suggests that there is an association between PPIs and clopidogrel resulting in increased readmission with acute coronary syndromes but not in increased mortality. Larger scale studies are required to confirm or refute these observations.

**Competing interests** None declared.

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**PWE-170**

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**PWE-171**

**STRUCTURE-FUNCTION ANALYSIS OF POLYMORPHIC VACA TOXIN VARIANTS FROM HELICOBACTER PYLORI USING A RECOMBINANT APPROACH**

doi:10.1136/gutjnl-2012-302514d.171

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**Introduction** The Gram negative bacterium Helicobacter pylori persistently colonises the stomachs of around half the world’s population. It causes chronic asymptomatic gastritis, and leads to peptic ulceration and gastric cancer in a small proportion of cases. One of the key factors influencing the development of more severe pathology and disease is the expression of virulence factors by the colonising strain. The vacuolating cytotoxin, VacA, is a major determinant of H pylori pathogenicity and is highly polymorphic. Strains producing more active forms of VacA (I1 types) are more strongly associated with gastric cancer than strains producing less toxigenic VacA (I2 types). The I-region polymorphism is characterised by 10 amino acid substitutions and a serine-asparagine-glutamine (SNQ) tri-peptide insertion in I2. We aimed to further characterise the structure and function of this important region.

**Abstract PWE-169 Figure 1** Combined peak area (arbitrary units) of selected carbonyl compounds (namely: 2,3-butanediol/propionaldehyde/2-heptenal, (Z)-octanal/nonanal combined) present in faecal samples analysed.

**Conclusion** Very little work has been published on volatile compounds from stool in particular from the stool of children, this work adds to this knowledge. Some compounds such as ethanol were found in approx. equal amounts in the diarrhoea of infected and non-infected stool, however in general there was a greater frequency and abundance of VOCs in the rota infected samples, particularly of aldehydes and 2,3-butandione.

**Competing interests** None declared.