Gastrointestinal complications following Percutaneous Coronary Intervention (PCI)

Introduction Percutaneous Coronary Intervention (PCI) is widely used in the emergency and elective setting. If drug-eluting stents are deployed, dual antiplatelet therapy must continue for 12 months. Antiplatelet agents are a recognised cause of overt and occult gastrointestinal (GI) bleeding. The aim of this study was to determine the rate of GI complications following PCI in a tertiary cardiothoracic centre.

Methods A cohort of 604 patients, who underwent coronary stenting in a 6-month period, was identified from cardiology records. 369 patients were tertiary referrals and so excluded from analysis as follow-up data was unavailable. The electronic notes of 235 patients were reviewed to identify GI complications in the year after PCI. These were classified as overt GI bleeding, anaemia or dyspeptic symptoms.

Results The patients were aged 39-73 years (median 64 years). 78% were male and 97% were Caucasian. 80% of patients were on aspirin and clopidogrel for at least 12 months after PCI.

14% of patients were anaemic prior to PCI, defined by a local laboratory reference range of haemoglobin (Hb) <125g/L. It was not standard practice to monitor Hb in the year after PCI, but 97% of patients had Hb tested for another reason, 33% of whom had microcytosis.

In the year post-PCI, 45 (19%) patients were anaemic on at least one test, with no obvious cause, such as surgery. Of these, only 16% were tested for iron deficiency anaemia (IDA). 5 of 7 patients tested had definite IDA.

Prior to PCI, only 3% of the cohort were anaemic to a degree that would have prompted referral for investigation, based on Department of Health guidelines for suspected lower GI cancer (Hb <11g/dL in men, Hb <10g/dL in postmenopausal women). During treatment with aspirin and clopidogrel, this proportion rose significantly to 10% (p=0.006)

Within 12 months of PCI, 10 patients had a gastroscopy, 2 patients had upper and lower GI endoscopy, and 3 had lower GI endoscopy only. The indications in these 15 patients included overt bleeding (5 patients), IDA (4 patients) and GI symptoms (4 patients). 7 of 12 patients had endoscopic signs of upper GI inflammation, with findings of oesophagitis, gastritis or duodenitis. 4 OGDs were normal and another identified Barrett’s oesophagus. Significant lower GI diagnoses included rectal cancer, a sigmoid ischaemic ulcer and diverticular disease.

Conclusion These results suggest dual antiplatelet therapy increases the prevalence of anaemia, which may be due to iron deficiency. Hb and iron status are not routinely monitored in the year post-PCI. Iron deficiency can cause significant symptoms of fatigue, even in the absence of anaemia and IDA may herald a more sinister underlying pathology. We suggest a review of practice post-PCI, as identification of iron deficiency may prompt timely treatment and investigation.

Competing interests None.

Keywords Anaemia, aspirin, clopidogrel.