Gastroduodenal

HFR-4

PREVALENCE AND PREDICTIVE FACTORS FOR ANTIBIOTIC RESISTANT *HELICOBACTER PYLORI* IN PATIENTS UNDERGOING UPPER GASTRO-INTESTINAL ENDOSCOPY

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Introduction Antibiotic therapy is routinely used to eradicate *Helicobacter pylori* (*Hp*) infection, but emerging antibiotic resistance is a considerable concern. This study aimed to determine the prevalence of antibiotic resistance in high-risk patients undergoing upper gastrointestinal (GI) endoscopy and to identify potential predictive factors.

Methods The retrospective study cohort comprised of all patients with recurrent/previous *Hp* infection undergoing upper GI endoscopy at the Royal Free Hospital (RFH), London between 2009 and 2019. Demographic, clinical, socioeconomic data and self-reported ethnic origin were retrieved from the medical records. Deprivation scores were based on postcode using the 2019 English Indices of Deprivation and decile rankings. The results of gastro/duodenal biopsy microscopy, culture and sensitivity testing were retrieved.

Results A total of 408 patients (60% female, mean±1SD age 40.9±20.8 yr) were included; 118 (28.9%) were *Hp* culture positive while 290 were culture negative. There were no age or sex differences between the two cohorts; significantly fewer *Hp* positive patients were Caucasian (28% *vs.* 43%; *p*=0.039) and significantly more were classified as deprived (68% *vs.* 57%; *p*=0.031). Non-Caucasian origin (*p*=0.040) and greater deprivation (*p*=0.031) were significant independent predictors of *Hp* infection. Antibiotic resistance profiles were available in 115 patients; of these eight were fully sensitive but 107 (93.0%) exhibited antibiotic resistance, most commonly to metronidazole (100/111;90.1%) or clarithromycin (82/115;71.3%) or both (75/111;67.6%); resistance was also observed to tetracycline (3/113; 2.7%); amoxicillin (9/108; 8.3%); levofloxacin (20/111;18.0%) and rifabutin (8/26;30.8%). Overall, 81/107 (68.6%) cultures exhibited resistance to two or more antibiotics. Older age (*p*=0.009), greater deprivation (*p*=0.002), Caucasian origin (*p*=0.027) and use of PPIs (*p*=0.030) were significant independent predictors of antibiotic resistance but the number of failed eradication episodes was not.

Conclusion Non-Caucasian origin and greater deprivation were identified as independent risk factors for the development of *Hp* infection while Caucasian origin, greater deprivation, older age and use of PPIs were independent risk factors for the development of antibiotic resistance. High levels of resistance were observed to the commonly used first and second line antibiotics in the majority of culture positive patients. In consequence wider use of culture and sensitivity testing of gastric biopsies in *Hp* positive patients should be advocated.

HFR-5

INCREASING THE LOW-RISK THRESHOLD FOR PATIENTS WITH UPPER GASTROINTESTINAL BLEEDING DURING THE COVID-19 PANDEMIC

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Introduction In light of the COVID-19 pandemic, speciality groups have recommended down-scaling endoscopy (OGD) provision to true emergencies only. Following review of a large UK study on Upper Gastrointestinal Bleeding (UGIB), we extended the threshold for patients not requiring inpatient OGD from Glasgow Blatchford Score (GBS) 0-1 to GBS 0-3. We studied the safety and efficacy of this change in practice.

Methods Over 3 months (01/04/20 – 30/06/20), we prospectively collected data on consecutive unselected patients with UGIB at 5 large Scottish hospitals. All patients were followed up for 30 days. Data collected included patient characteristics, referral source, GBS, COVID-19 status, endoscopic findings and interventions, length of stay, rebleeding and mortality. We compared data with pre-pandemic prospective data on UGIB available in 3 of the centres.

Results 397 patients were included. 69 (17.3%) were pre-existing inpatients. 288 (72.5%) patients received OGD. 36.5% patients had endoscopic intervention at index OGD. Mean length of stay was 7 days. Overall 30-day all-cause mortality rate was 13.1% (53/397) and 33.3% (23/69) for pre-existing inpatients. Bleeding related mortality was 5% (20/397). Overall 30-day rebleeding rate was 6.3% (25/397). On comparison with pre-pandemic data in 3 centres, there was a fall in mean number of UGIB presentations per week (26 *vs* 19; *p*=0.004) and a lower proportion of GBS 0-3 presentations (33.3% *vs* 21.5% *p*=0.003) during the pandemic, with a rise in mean GBS (6.5 *vs* 8.3; *p*<0.001) and all-cause mortality (6.8% *vs* 12.2% *p*=0.02). On logistic regression analysis, predictors of all-cause mortality were: cirrhosis, GBS >9, pre-existing inpatient status, age >70, and confirmed COVID-19. 84 (21.2%) patients had GBS 0-3, of whom 19 (22.6%) received inpatient OGD due to clinical concern, with endotherapy used once. Of all GBS 0-3 patients, none had rebleeding, none represented requiring OGD at a later date, and one died due to sepsis. 82 patients were clinically suspected to have COVID-19 at presentation, but only 14 were confirmed on testing. The 30-day all-cause mortality in this group was 20.7% (17/82), and 35.7% in the 14 confirmed cases.

Conclusion During periods of severe pressure from COVID-19, extending the low-risk threshold for inpatient endoscopy in acute UGIB to GBS 0-3 appears safe. The higher GBS and mortality of patients with UGIB during the pandemic is likely due to non-presentation of lower risk patients as a secondary effect.