IS THERE A ROLE FOR FAECAL ELASTASE-1 IN PATIENTS REFERRED TO A LUMINAL GASTROENTEROLOGY SERVICE?

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Introduction Pancreatic disease can be subtle particularly in the early stages and therefore may be missed. Symptoms of pancreatic disease are not specific and therefore patients may present to gastrointestinal (GI) services but be incorrectly diagnosed with an alternative disorder. The authors analysed a large cohort of patients referred to our unit for investigation of GI symptoms to try to identify predictors of pancreatic disease and the utility of faecal elastase-1 (Fel-1) as a marker of pancreatic disease.

Methods A database of patients referred to our unit between January 2005 to June 2009 for investigation of GI symptoms was examined. This database included demographics, reason for referral, bowel frequency, Fel-1 level, abdominal imaging findings and final diagnosis. Fel-1 was considered abnormal below 200 μg/g stool. Using this cut off univariate analysis was performed to identify potential predictors of pancreatic disease. Variables with a p value <0.1 were entered into a logistic regression.

Results 621 patients (mean age 48.1, 224 males) were analysed. The majority had been referred for abdominal pain (n=125), diarrhoea (n=426) or weight loss (n=46). The prevalence of abnormal Fel-1 was 55/621 (8.9%, 6.7–11.4). The prevalence of a low faecal elastase-1 in patients with abdominal pain was 7/125 (5.6%), diarrhoea 36/426 (8.5%) and weight loss 4/46 (13.0%). The prevalence of abnormal pancreatic imaging was 12/55 (21.8%, 11.8–35.0). Univariate analysis showed Fel-1<200 to be associated with male gender (OR 1.4), age >50 (OR 2.4) and diabetes (OR 4.6). On multivariate analysis only age and diabetes were independent risk factors. The sensitivity, specificity, positive predictive value and negative predictive value for Fel-1<200 was 100%, 92.9%, 21% and 100% respectively. Receiver operating characteristic curve analysis showed that Fel-1<200 had an area under the curve of 0.97 (0.95–0.99, p=0.008).

Conclusion Exocrine pancreatic disease is a common problem in patients referred to GI services and is associated with increasing age and the presence of diabetes. Fel-1 accurately identifies those patients with underlying pancreatic disease. The authors would suggest that Fel-1 should be performed routinely in patients presenting to a general luminal gastroenterology service with symptoms of abdominal pain, diarrhoea and particularly weight loss.

Competing interests None.

Keywords faecal elastase, prevalence.