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A PROSPECTIVE PILOT STUDY OF THE PREVALENCE OF PANCREATIC DISEASE IN PATIENTS WITH ALCOHOL RELATED LIVER DISEASE USING FAECAL ELASTASE-1

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Introduction Excess alcohol intake is associated with liver disease and pancreatic disease, however, the majority of individuals appear to present with a single condition, for example, chronic liver disease. There is a paucity of studies assessing the prevalence of pancreatic disease in patients with alcohol related liver disease (ALD). Detecting pancreatic disease in patients with ALD may be important as symptoms may go untreated and nutrition may be affected. The aim of this study was to assess the prevalence of pancreatic disease in a cohort of patients with ALD.

Methods Consecutive patients seen in the liver outpatient clinic were invited to participate. Demographics, severity of liver disease (as judged by Childs-Pugh score), presence of diabetes and presence of relevant symptoms were recorded. Participants were asked to provide a stool sample for analysis of faecal elastase-1 level (Fel-1). Abnormal Fel-1 was defined as <200 µg/g stool. All patients had undergone abdominal imaging to assess their liver disease and these were reviewed. Prevalence of abnormal elastase was compared to two controls groups; patients with chronic diarrhoea (n=105) and non-diarrhoea controls (n=95) (both groups did not have liver disease).

Results 79 patients with ALD were included (mean age 49.9, 48 males) with Childs-Pugh grades A/B/C of 23/34/22 respectively. The prevalence of abnormal Fel-1 was 20/79 (25.3%, 95% CI 16.2% to 36.4%), 3/105 (2.9%, 95% CI 0.6% to 8.2%) and 3/95 (3.2%, 95% CI 0.7 to 8.9) in those with ALD, chronic diarrhoea and non-diarrhoea controls respectively (p<0.001). In the ALD group, abnormal elastase was not related to age, gender, severity of liver disease or the presence of relevant symptoms (all p>0.1). Abnormal Fel-1 was associated with the presence of diabetes (9/20 Fel-1<200 vs 11/59 Fel-1>200, OR 3.6, 1.2–10.7, p=0.003). Abnormal pancreatic imaging was found predominantly in those with Fel-1<200 (10/20 vs 2/59, p<0.001). Sensitivity, specificity, positive predictive value and negative predictive value for Fel-1<200 in those with ALD were 0.83, 0.85, 0.65 and 0.94 respectively.

Conclusion Co-existent pancreatic disease is common in patients with ALD. Faecal elastase is a useful test in identifying cases in an ALD cohort as the only clinical marker is the presence of diabetes. More data is required to assess the effect of pancreatic disease in ALD and any potential advantage to enzyme replacement therapy.

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Keywords alcoholic liver disease, faecal elastase, prevalence.