

but no single study has systematically synthesised all available evidence examining this issue. We conducted a systematic review and meta-analysis to determine the prevalence of CD in adults presenting with cryptogenic hypertransaminasaemia, as well as the prevalence of hypertransaminasaemia in patients with newly-diagnosed CD.

Methods MEDLINE and EMBASE were searched (up to September 2010) to identify case series and case-control studies (sample size >90) that applied serological tests and/or distal duodenal biopsy to unselected adult patients (>90% aged 16 years or over) with cryptogenic hypertransaminasaemia. The proportion of individuals with abnormal serum transaminases who had either positive coeliac serology, or biopsy-proven CD, were combined to give a pooled prevalence, with 95% confidence intervals (CI). Studies of patients with newly-diagnosed biopsy-proven CD that applied tests of liver function were also eligible. The pooled prevalence of hypertransaminasaemia among newly-diagnosed CD patients was calculated with 95% CIs.

Results The search identified 2705 citations. Of these, 31 appeared relevant and were retrieved for evaluation. Twelve studies were eligible for inclusion, with excellent agreement between investigators (Kappa = 0.86). Six studies, involving 919 patients, reported the prevalence of positive coeliac serology or biopsy-proven CD in patients with cryptogenic hypertransaminasaemia, with a pooled prevalence of 5.9% (95% CI 2.7% to 10.3%). Five studies excluded other causes of abnormal serum transaminases prior to screening for CD. When only these five studies were analysed, the pooled prevalence increased to 6.4% (95% CI 2.6% to 11.7%). The pooled prevalence of biopsy-proven CD in cryptogenic hypertransaminasaemia in the 6 studies was 3.6% (95% CI 1.4% to 7.0%) and 4.1% (95% CI 1.4% to 8.2%) in the five studies that first excluded other causes of abnormal transaminases. A further six studies, involving 1830 patients, reported the frequency of abnormal serum transaminases in newly-diagnosed CD, with a pooled prevalence of 22% (95% CI 8% to 39%).

Conclusion More than 20% of individuals with newly-diagnosed CD may have abnormal serum transaminases. The prevalence of CD in individuals with hypertransaminasaemia is between 3% and 4%, suggesting that routine screening for CD in this group of patients may be worthwhile. However, yield may be lower in individuals in whom other potential causes of hypertransaminasaemia have not already been excluded.

Competing interests None.

Keywords coeliac disease, duodenal biopsy, liver function test, transaminase.

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COELIAC DISEASE AND HYPERTRANSAMINASAEMIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction Several studies have suggested a positive association between coeliac disease (CD) and hypertransaminasaemia,