

ORIGINAL ARTICLE

IgA-Antitissue Transglutaminase: Validation of a Commercial Assay for Diagnosing Coeliac Disease

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SUMMARY

We have evaluated a commercial assay for serum IgA class antibodies to tissue transglutaminase, the enzyme identified as the major endomysial autoantigen in coeliac disease (CD). Sera were available from 130 adults diagnosed with CD in Southern Derbyshire between 01 01 97 and 31 12 99. Sera from 100 patients without villous atrophy on small intestinal biopsy were controls. The ability of the assay to detect abnormally low total IgA levels was assessed using sera from 18 subjects with IgA deficiency. Sensitivity and specificity of this IgA-anti tissue transglutaminase (tTGA) assay (86.2%, 91.0%) were inferior to endomysial antibody (EMA; 93.8%, 100%). tTGA has significantly higher sensitivity than IgA-antigliadin (76.2%). tTGA was appropriately undetectable (<0.03 U/mL) in 17 of 18 subjects with selective IgA deficiency. The high likelihood ratio (35) for tTGA at levels >9.0 U/mL and methodological advantages over EMA suggest that tTGA could be used as a first line diagnostic test for CD. At tTGA levels of 4-9 U/mL, use of EMA as a second line test would improve specificity. (Clin. Lab. 2002;48:241-246)