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IMPROVING DIAGNOSTIC ACCURACY IN CELIAC DISEASE DIAGNOSIS: ANTI-ENDOMYSIUM ANTIBODY ASSAY IN THE CULTURE MEDIUM OF DUODENAL BIOPSIES

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**ABSTRACT**

**Background and Aims:** Celiac disease (CD) diagnosis is becoming more difficult as patients with no intestinal histology lesions may also be suffering from CD. The aim of the study was to evaluate the diagnostic accuracy of anti-endomysium (EmA) assay in the culture medium of intestinal biopsies for CD diagnosis.

**Patients and Methods:** The clinical charts of 418 CD patients and 705 non-CD controls who had all undergone EmA assay in the culture medium were reviewed.

**Results:** EmA assay in the culture medium had a higher sensitivity (98% vs 80%) and specificity (99% vs 95%) than serum EmA/anti-tTG assay. Furthermore, during the follow-up, four patients with negative serum EmA/anti-tTG, normal villi architecture and positive EmAs in the culture medium, developed villous atrophy and underwent gluten-free diet with consequent resolution of the symptoms and complete intestinal histology recovery.

**Conclusion:** EmA assay in the culture medium should be included in the diagnostic criteria for CD diagnosis in "seronegative" patients.