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Summary

MUCOSAL LYMPHOCYTE RESPONSES TO WHEAT PROTEINS ARE ASSOCIATED WITH TRAV26-2 T CELL RECEPTOR EXPRESSION IN FUNCTIONAL DYSPEPSIA PATIENTS

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UEG Week Copenhagen 2023 | Poster

Oesophagus

October 15, 2023

An observational study of duodenal lymphocytes in functional dyspepsia patients demonstrates differential T cell responses to wheat proteins, with gliadin stimulation increasing Th2-like populations and reduced TRAV26-2 expression correlating with Th17-like cells.

KEY POINTS

- Gliadin stimulation, but not gluten, significantly increased effector Th2-like lymphocyte populations in FD patient duodenal biopsies compared to controls (25.83 ± 14.87 vs 16.34 ± 13.17, p = 0.01) and unstimulated FD samples (p = 0.04)
- Duodenal gene expression of TRAV26-2, a T cell receptor variant previously associated with gliadin responses in celiac disease, was decreased in FD patients compared to controls (0.003 ± 0.005 vs 0.013 ± 0.015, p = 0.04)
- In FD patients, TRAV26-2 expression positively correlated with Th17-like cell populations following gluten exposure (rs = 0.3733, p = 0.04), suggesting specific T cell receptor variants may be associated with immune responses to wheat-containing foods
- The study included 50 FD patients and 23 controls, with lamina propria mononuclear cells isolated from duodenal biopsies and exposed to gluten or gliadin for 24 hours before flow cytometry and qPCR analysis
- This work may be relevant to researchers and clinicians investigating immune mechanisms underlying food sensitivities in functional dyspepsia

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