

ALTERED EXPRESSION AND ENZYMATIC ACTIVITY OF XANTHINE OXIDASE IN INFLAMMATORY BOWEL DISEASE

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Poster

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A study of 50 subjects found increased xanthine oxidase expression and enzymatic activity in the intestinal mucosa of inflammatory bowel disease patients compared to healthy controls, with activity correlating with endoscopic disease severity in ulcerative colitis.

KEY POINTS

- Xanthine oxidase activity was significantly higher in both ulcerative colitis (mean 3.75 nmol UA/min/mg protein) and Crohn's disease patients (mean 5.10) compared to healthy controls (mean 1.11, $p < 0.001$).
- XO expression by RT-PCR was increased in ulcerative colitis sigmoid mucosa versus controls (RQ 1.93 vs 0.99, $p = 0.004$), confirmed by Western blot showing increased XO protein in both UC and CD patients ($p < 0.001$).
- In ulcerative colitis patients, XO activity correlated with Mayo endoscopic sub-score ($r = 0.346$, $p = 0.05$), suggesting association with disease severity.
- Immunohistochemistry showed higher XO expression in IBD patients with predominant localization in epithelial cells; the authors suggest XO as a potential therapeutic target.

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