

Expression profile of Serum LncRNA THRIL and MiR-125b in inflammatory bowel disease, 2022

Abstract

Background: Inflammatory bowel disease (IBD) is a chronic inflammatory gastrointestinal disease. We aimed to investigate the serum expression profiles of LncRNA THRIL and MiR-125b for the first time in IBD patients and how they relate to clinical and biochemical investigations.

Methods: Our study included 210 subjects, divided into 70 healthy subjects considered as control group (male and female), 70 patients with ulcerative colitis (UC), and 70 patients with Crohn's disease (CD). Blood samples were obtained from all subjects. Expression of LncRNA THRIL and MiR-125b in serum was detected by Quantitative real time PCR (qRT-PCR). **Results:** Our results showed a significant increase in the fold change of LncRNA THRIL in UC patients (Median=11.11, IQR; 10.21-12.45, $P<0.001$) and CD patients (Median=5.87, IQR; 4.57-7.88, $P<0.001$) compared to controls. Meanwhile, there was a significant decrease in the fold change of MiR-125b in UC patients (Median= 0.36, IQR; 0.19-0.61, $P<0.001$) and CD patients (Median= 0.69, IQR; 0.3 - 0.83, $P<0.001$) compared to controls. Furthermore, there was a negative significant correlation between LncRNA THRIL and MiR-125b in UC patients ($r=-0.28$, $P=0.016$) and in CD patients ($r=-0.772$, $P<0.001$). ROC curve analysis was done showing the diagnostic value of these markers as predictors in differentiating between cases of UC, CD, and control. **Conclusion:** Serum LncRNA THRIL and MiR-125b could be used as potential biomarkers for diagnosis and prognosis of ulcerative colitis and Crohn's disease.