

Association Between LINC00657 and miR-106a Serum Expression Levels and Susceptibility to Colorectal Cancer, Adenomatous Polyposis, and Ulcerative Colitis in Egyptian Population

Abstract

Colorectal cancer (CRC) represented the second cause of mortality among cancer patients. Long noncoding RNAs and microRNAs (miRNAs) serve as noninvasive biomarkers for CRC surveillance and introduce new therapeutic approaches. LINC00657 and miR-106a expression levels play a pivotal role in CRC. This study included 190 Egyptian subjects, and the expression levels of LINC00657 and miR-106a in serum were measured by using quantitative real-time polymerase chain reaction. We found that upregulation of LINC00657 and downregulation of miR-106a are significantly associated with the development of CRC. Also, a positive correlation was detected between their serum levels. In addition, serum LINC00657 can distinguish adenomatous polyposis (AP) patients and/or ulcerative colitis (UC) patients from controls. Also the miRNA-106a expression level discriminates AP but not UC from healthy individuals. Our study cited new diagnostic biomarkers for CRC, AP, and UC among Egyptians in addition to be noninvasive screening tools for CRC in both healthy subjects and those having precancerous lesions.