

Abstract

Colorectal cancer is the third most common cause of death in the world also third and fourth most common cancer among men and women in Iran respectively. *Epidermal growth factor receptor* is a tyrosine kinase receptor that shows over expression in epithelial tumors and regulates important processes in tumorigenesis. Differences in genetic susceptibility and exposure to a variety of environmental and nutritional factors in the incidence and characteristics of colorectal cancer are based on the geographic region and race. In the present study, the expression of EGFR in formalin fixed paraffin-embedded (FFPE) colorectal cancer tissue samples in the province of Sistan and Baluchestan of Iran were studied. Fifteen FFPE colorectal cancer tissue samples from medical centers in Sistan and Baluchestan of Iran were analyzed for EGFR gene expression level by real-time quantitative reverse transcriptase polymerase chain reaction. All PCR reactions were performed in triplicate for both target gene and internal control (*18s rRNA*) with the $2^{-\Delta\Delta Ct}$ method. Differences in target gene expression levels in patients and controls were evaluated with t-test. $P \leq 0.05$ was considered to be significant. All analyses were performed using the SPSS 13 software (SPSS, Inc., Chicago, IL). The results showed EGFR gene over expression in 12 (80%) of 15 patients. There was a statistically significant difference in the prevalence of EGFR expression between patients and control ($p < 0.05$). Our results demonstrated EGFR gene over expression in formalin fixed paraffin-embedded (FFPE) colorectal cancer tissue samples compared with controls.

Key words: Colorectal cancer, epidermal growth factor receptor, reverse transcriptase real-time polymerase chain reaction



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**Evaluation of *epidermal growth factor receptor* gene
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Balochestan province by reverse transcriptase real-time
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