

عنوان مقاله:

Prevalence and Phylogenetic Analysis of *Fusobacterium nucleatum* and Virulent Factor FadA among Ulcerative Colitis Precancerous and Colorectal Carcinoma Patients in the Iraqi Kurdish Population

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خلاصه مقاله:

Fusobacterium nucleatum is considered one of the main risk factors that play a key role in the promotion and progression of colorectal carcinoma. The main goal of this study is to find out the association between the prevalence of various subtypes of *Fusobacterium nucleatum* with inflammation and colorectal cancer progression, in addition to screening the positive ratio of the possession of the FadA gene. One hundred tissue samples were collected from healthy individuals and patients from colonoscopy and surgical operation biopsies. The patients were categorized into (Ulcerative colitis, precancerous colitis and colorectal carcinoma) according to their colonoscopy and histopathology examination reports. Molecular detection of *Fusobacterium nucleatum* and FadA gene was performed via PCR and gel electrophoresis, and then phylogenetic analysis for *Fusobacterium nucleatum* was done using 16S rRNA partial sequencing based on specific primers. The results showed significant differences among the four groups regarding the prevalence of *Fusobacterium nucleatum*. The most prevalent subtype was *Fusobacterium nucleatum* subtype *animalis*, which constitutes 7 out of 17 samples. The ratio of the FadA-positive gene was 20% among the *Fusobacterium nucleatum*-positive cases. This finding suggested a strong correlation between *Fusobacterium nucleatum* and colon inflammation and cancer progression steps, and *Fusobacterium nucleatum* subtype *animalis* was the most prevalent subtype.

کلمات کلیدی:

Fusobacterium nucleatum, FadA, Colorectal Carcinoma

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