

عنوان مقاله:

Effect of Microbiota in the Development of Breast Cancer

محل انتشار:

مجله آرشیو رازی، دوره 76، شماره 4 (سال: 1400)

تعداد صفحات اصل مقاله: 8

نویسندگان:

A Saud Hussein - *Department of Biology, College of Science, Kirkuk University, Kirkuk, Iraq*

N Ibraheem Salih - *Department of Microbiology, College of Medicine, Tikrit University, Tikrit, Iraq*

I Hashim Saadon - *Department of Microbiology, College of Medicine, Tikrit University, Tikrit, Iraq*

خلاصه مقاله:

Breast cancer is the most frequent cancer among women and causes the greatest number of cancer-related death among women all over the world. It approximately accounts for 15% of all cancer death. The human microbiota is the term applied to the aggregate of microbes that live in different habitats of living organisms 'bodies, including the gut, skin, vagina, and mouth, as well as nose, conjunctiva, pharynx, and urethra, among others. Increasing evidence is pointing to the role of the microbiome in the occurrence and development of a variety of cancers. Intestinal microbiome imbalance is related to the occurrence of gastrointestinal tumors, such as esophageal, gastric, colorectal, and gallbladder cancer. The present study aimed to identify the role of microbiota in the development of breast cancer. The women with breast cancer (n=130) in this study were in the age range of 25-75 years. The study was conducted in Kirkuk city of Iraq from September 10, 2019, to March 15, 2020. The control group included 20 women diagnosed with benign breast lesions in the age range 25-75 years, who matched the women in the patient group. Blood samples and breast tissue samples were taken from patients with breast cancer and benign breast lesions. Blood samples were examined through immunological methods, enzyme-linked immunosorbent assay (ELISA) was adopted for the detection of interleukin-19 (IL-19). Breast tissue samples were taken from breast cancer and benign breast lesions patients to isolate and identify bacteria. Based on the obtained results, only 6 out of 30 (20%) cultured breast tissue samples from women with breast cancer showed bacterial growth. In total, 4 (67%) and 2 (33%) of these 6 positive cultures were *Escherichia coli* and *Staphylococcus aureus*, respectively, and this relation was statistically significant. However, no bacterial growth was observed on the cultured breast tissue samples taken from women with benign breast lesions. Moreover, the difference between women with a positive and negative result of bacterial culture and stages of breast cancer was statistically non-significant. It is worth mentioning that 50% of women with breast cancer and bacterial growth were within the age range of 40-49 year. The present study revealed that the difference between women with breast cancer and those with benign breast lesions was statistically highly significant according to the place of residence. In addition, the mean level of IL-19 among women with breast cancer was lower than that in ... women with benign breast lesions, and this relation was statistically

کلمات کلیدی:

Breast cancer, IL-19, Microbiota

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