COLORECTAL CANCER

Colon cancer is cancer of the large intestine (colon) the lower part of your digestive system. Rectal cancer is cancer of the last several inches of the colon. Together, they are often referred to as colorectal cancers. Most cases of colon cancer begin as small, noncancerous (bening) clumps of cells called adenomatous polyps. Over time some of these polyps become colon cancers.

- About 136,000 people are diagnosed each year with colorectal cancer in the U.S.

- Each year about 50,300 people are predicted to die of the disease.

- In both men and women, colorectal cancer is the third most commonly diagnosed cancer and the third leading cause of cancer death.

- Colorectal cancer incidence and mortality rates are highest in African American men and women.

- Incidence and mortality rates among other major racial ethnic groups are lower than those among Caucasians.

Symptoms of colorectal cancer:

- Abdominal distension without weight gain

- Abdominal pain (rare in colon cancer)

- Unexplained, persistent nausea or vomiting

- Unexplained weight loss

- Change in frequency or character of bowel movements

Treatment Options:

- Surgery

- Radiation therapy

- Chemotherapy

- Targeted therapy

How is colorectal cancer related to your mouth?

A strain of mouth bacteria that causes gum disease may play a significant role in colorectal cancer, according to two independent studies. One of these studies from Harvard and the other from Case Western Reserve University, published in the journal Cell Host & Microbe.

Although **Fusobacteria** start off in the mouth and are frequently associated with gum disease, they can migrate through blood vessels to far reaches of the intestinal tract, including the colon. This led investigators at Harvard to look at earlier stages of colon cancer to see if this discrepancy was merely an issue of timing. They found fresh evidence that Fusobacteria are intimately nestled within tumors of the colon.

Oral and Intestinal Dysbiosis and Colorectal Carcinoma

Dysbiosis is known to be associated with many oral diseases like gingivitis, periodontitis, and tonsillitis, as well as systemic diseases like diabetes, obesity, inflammatory bowel disease (IBD), allergies, and colorectal carcinoma. [1]

Oral dysbiosis can lead to intestinal dysbiosis and that, in turn, to colorectal cancer. Oral dysbiosis does so by allowing harmful bacteria to disseminate into the gut and affect the composition of the gut microbiome. People with periodontal diseases are known to have a higher risk of developing CRC with a poor prognosis. [2]

Mechanism Explaining Oral Dysbiosis and the Development of Colorectal Carcinoma

Pathogens are found to be abundant in oral biofilms of people suffering from periodontal conditions. These pathogens can get to the colon via saliva or the bloodstream, where they become a part of the intestinal microbiome. A microbial instability is created which leads to intestinal dysbiosis.

While oral and gut health seem to be unrelated, we now know they are not. Poor oral hygiene can affect multiple systems, including the gut, eventually leading to the development of cancer

Resources

www.cancer.org; www.emedicinehealth.com

www.webmd.com; www.medicaldaily.com

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1. Guarner, F. Enteric flora in health and disease. Digestion 2006, 73, 5–1 2. Momen-Heravi, F., Babic, A., Tworoger, S. S., Zhang, L., Wu, K., Smith-Warner, S. A., ... & Zhang, X. (2017). Periodontal disease, tooth loss and colorectal cancer risk: Results from the Nurses' Health Study. *International journal of cancer*, *140*(3), 646-652.