

THE ROLE OF MICROBIOLOGICAL INFECTIONS IN THE ETIOLOGY OF COLORECTAL CANCER

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ABSTRACT

Colorectal cancer (CRC) is a disease that affects part of the gastrointestinal tract. The risk for developing CRC can be inherited, but as the disease is multifactorial, it is believed that environmental factors play a more important role than heredity. Thus, it was identified that CRC is also associated with infections by pathogens, especially with sexually transmitted infections. The aim of this study is to describe the pathophysiology of CRC, as well as to assess whether infections caused by Human Papillomavirus (HPV), Human Immunodeficiency Virus (HIV) and *Neisseria gonorrhoeae* are capable of promoting alterations that may lead to colorectal carcinogenesis. This is an integrative review of studies collected on PubMed, ScienceDirect and LILACS platforms; using the descriptors "Adenocarcinoma", "Alphapapillomavirus", "Colorectal Neoplasms", "Gonorrhea", "HIV" and "Sexually Transmitted Diseases". We included 32 studies, in English and Portuguese, available in full. Based on the analyses, it was observed that most RCCs originate from polyps that evolve into adenomas. This process occurs as a result of distinct and cumulative alterations, especially in oncogenes, tumor suppressor genes and repair genes. After the research, it was found that HPV infection is a potential risk factor for CRC, since the virus is capable of promoting enough alterations to cause its carcinogenesis. In addition, our analyzes do not rule out that HIV carriers are also a high-risk group for the onset of the disease, and one of the hypotheses for this event is the action of the Tat oncoprotein. In gonorrhea, it was demonstrated that colitis – a common manifestation of the disease, can evolve from a controllable clinical condition to the development of CRC, due to a pathological response of inflammasomes. Therefore, it is believed that our conclusions may have an important scientific significance for a better understanding of the risk factors associated with CRC.

KEYWORDS: Adenocarcinoma; Colorectal Neoplasms; Sexually Transmitted Diseases.

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