

Diabetes Mellitus as a Risk-factor for Colorectal Cancer

Literature Review - Current Situation and Future Perspectives

Alexandra Agache^{1,2}, Petronel Mustăţea^{1,2}, Octavian Mihalache^{1,2}, Florin Teodor Bobîrca^{1,2},
Dragoş Eugen Georgescu^{1,2}, Cristina Mihaela Jauca¹, Andra Bîrligea¹, Horia Doran^{1,2},
Traian Pătraşcu^{1,2}

¹"Dr. I. Cantacuzino" Clinical Hospital, Department of General Surgery "I. Juvara", Bucharest, Romania

²"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

Abstract

Colorectal cancer and Diabetes Mellitus represent a major public health issue, first, by the number of new cases which are at an alarming rate. Secondly, by the negative effect over the quality of life, socio-economic status and lifespan, representing high morbidity and mortality causes. Diabetes Mellitus is the disease of the century with a global prevalence (standardised-age) which doubled since 1980, rising from 4,7% to 8,5% in adult population. In 2012, the estimated number of fatalities caused by Diabetes Mellitus and other related complications was at 3,7 million, out of which 43% were patients under the age of 70. Neoplasia represents the second cause of death, after cardiovascular disease. The occurrence of Colorectal cancer (CRCA) is rated for men and women at 3rd and 2nd place. However, the rate of mortality from CRCA is in the 4th place, representing 8,5% out of the total cancer related deaths. 52% of these cases are recorded in underdeveloped countries, considering their level, this reflects a very low survival rate. Moreover, every year, approximately 1.4 million cases are being diagnosed out of which 55% appear in overdeveloped countries. Screening for colorectal cancer refers to the periodical evaluation of the asymptomatic patients who are at a risk of developing this type of neoplasia. The colorectal cancer contains a series of particularities which makes it ideal for screening. Since the end of the 19th century there has been a high suspicion that type II diabetes, through direct etiological mechanisms, may play a part in carcinogenesis (breast, endometrium, colorectal, pancreas, liver, non-Hodgkin's lymphoma). At the moment, the relevant published literature presents type II diabetes as an independent risk factor for colorectal cancer. Although, despite experimental proof, many epidemiological studies, case-controlled studies and meta-analysis, there still is the necessity for prospective studies which can intensify the existing results and can allow the colorectal cancer screening to adapt to these patients.

Key words: Diabetes Mellitus, colorectal cancer, screening