Colon cancer – etiology, symptoms and treatment-Review arrticle

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Abstract
Malignant neoplasm of the colon is the second in terms of cancer mortality in Poland in both sexes. Annually around 1.4 million cases are recognized in the world, and almost 700 thousand people die. There are many causes and risk factors for colon cancer include, among others; epithelial, genetic and dietary factors.
Research Goal: Goal of this dissertation is a review of literature about colorectal cancer.
Results: Despite performing screening, and the progress made in treating colon cancer patients, morbidity and mortality is still large and growing. It is therefore important to educate the public on the prevention of colon cancer, to combat bad eating habits and to promote healthy lifestyles.

Keywords: Cancer, colorectal cancer, antimicrob, radiotherapy

Introduction

Malignant neoplasm of the colon (colon, rectal-osseous bend, rectum and anus) (C18-20) is the second in terms of cancer mortality in Poland in both sexes (males — 12.4%; females — 10.1%), and the number of diseases is steadily rising . The most common colorectal cancer is locates: in the rectum (30 – 50%), the sigmoid colon (15 – 20%), the ascending colon (14%), the transverse colon (9%) and descending colon (6%). Most deaths due to malignancies of the colon occur after 60. Years of age (over 80%). The most deaths in men are recorded in 8. Decade of life, in 9 women. Decade of life. [1]. Due to the ageing of the Polish population and the increase in the number of people after 65 years of 6 467 in 2010 10 users 932 in 2035 and the current incidence trends, it is predicted that in 2025, the incidence of malignant colorectal malignancies will be overall 24 600 , 15 500 in males and 9 100 in females. 2

The etiology of colon cancer is not fully understood. There are many factors that increase the risk of developing, which can be divided into four groups: epidemiological, genetic (intestinal), dietetic and mixed. The first group of risk factors include persons over 40 years of age, white, overweight, with low physical activity, smoking tobacco, excessively consuming alcohol, the northern part of Europe. The greatest risk of developing is in developed countries: in Australia and New Zealand (standardised incidence rate 38,2/100 thousand). Per year) in the European Union (31.3) and North America (26.1) and the smallest in Africa (6.3). [3] Occurrence of colorectal cancer among relatives 1. Degree (in the absence of a genetically determinated syndrome), genetically determined disease syndromes leading to the development of cancer [an family polyposis syndrome (FAP, familial adenomatous polyposis), hereditary colon cancer Not associated with polyposis (HNPCC, hereditary nonpoly colon cancer, Lyncha syndrome)]. Inflammatory diseases of the colon, for example ulcerative colitis, Crohn's disease, extensive inflammatory lesions lasting more than 10 years, also exacerbate the risk of cancer. It is now believed that a diet with a low content of fiber, rich in animal fats, red meat causes the legation of intestinal contents, the production of bile acids, which cause harmful effects on colon cells. The history of pelvic radiotherapy, cholecystectomy also increases the likelihood of developing colon cancer.

Symptoms

Symptoms of colon cancer depend on its location. For cancer of the right half of the colon, it is characterized by the occurrence of a dull pain in the area of the lower abdomen on the right side, in the area of the navel or lower abdomen, a dark stool, and a palpating tumor on this side of the abdomen. Pain of the nature of intestinal colic, change in the rhythm of bowel movements (stools narrowed, constipation), fresh blood in the stool and symptoms of obstruction occur more often when the disease affects the left half of the colon. In the rectum carcinogen dominates feelings of pressure on stool, incomplete bowel movements, narrow stools.

Diagnostic

Colon cancer is almost always a adenocarcinoma built from the tubular structures. Signet cell carcinoma, like rare small cell, is characterized by a worse prognotic. In laboratory studies, the most common is microcytological anemia, elevated CEA levels (10 – 15% of patients with a normal score) and a positive feces test for occult blood. The study, which should be part of the initial diagnosis of tumors of the lower gastrointestinal tract, is a proctological study (per rectum). [1]. The basis for diagnosis is the endoscopic studies of the lower gastrointestinal tract, which allow the detection and collection of tumour slices and the determination of the rest of the intestine. An important element in the diagnosis is in the execution of a histopathological examination, the determination of the advancement according to the TNM classification. It is now an indispensable element to determine the

status of RAS genes by molecular methods (exclusion of activating mutations in Eksons 2. – 4. KRAS And NRAS) and additionally immunohistochemical confirmation of the presence of EGFR proteins (a positive reaction of ≥ 1% of cells is assumed). These studies are necessary for the qualification of patients with metastatic colorectal cancer for the treatment of anti-EGFR. The main prognostic factors in colon cancer are clinical parameters such as TNM or Duke's Classifi cation, infiltrate depth, invasion into blood and lymphatic vessels, seizure of lymph nodes and Degree of differentiation [5, 6, 7, 8]. Colorectal cancer develops from polyps, and this process lasts most often a dozen years. In Poland since 2000 years (and from 2005 under the law) began the implementation of the national Programme for the Eradication of cancer, which is one of the tasks of the research programme Screening for early detection of colon cancer [4]. Screening was shown to be highly effective in which the occult blood stool test and endoscopic tests were used. This study reduces morbidity due to early polypectomy and mortality.

Treatment
Treatment of colon cancer depends on the advancement, localization, histopathological diagnosis, from the presence of mutations of the aforementioned mutations and the presence of EGFR proteins. In the degree of stage I-III of surgical cancer of the colon the most important element is radical surgical procedure and supplemental chemotherapy (3 degree) based on fluorouracil, (LVFU2, FOLFOX-4, XELOX, capecitabine). In the case of rectal cancer, the treatment is aimed at minimising the risk of recurrence and the preservation of sphinrters. The standard method of surgical treatment of rectum cancer is the complete excision of the mezorecum(total mesorectal excision – TME) or local notch (with access through the anus from the posterior access or endoscopic route; endoscopic microdissection – TEM)). [10] The superiority of radiation therapy (RTH) was demonstrated in three randomised trials. This is indicated in patients with locally advanced cancer of the rectum (non-resective) without distant metastasis which use (CRTH) allows the reduction of the tumour mass which will facilitate its resection. Standard radiotherapy (50Gy) is associated with chemotherapy (FU and LV or capecitabine). Systemic treatment is also used in selected cases after surgery.The chance of a cure or long-lasting survival in selected patients in the colon cancer spreading stage gives a residual metastazectomy preceded by chemotherapy. The potential for systemic therapy has increased the drugs targeted by the molecular. Among the new generation drugs currently used in patients with advanced colorectal cancer are monoclonal antibodies: bevacizumab [vascular huvec growth factor antagonist (VEGF), cetuximab and vascular panitumumab [epidermal growth factor receptor (EGFR)] and aflibercept (known as the ' VEGF Trap ') and regorafenib (a multiinase inhibitor). [9]. The choice of palliative treatment strategy should be based on further possibilities for effective treatment, and above all on the condition of the patient and the toxicity profile of the drugs used.

Summary
Despite the screening, and the progress made in treating colon cancer patients, morbidity and mortality is still large and growing. It is therefore important to educate the public on the prevention of colon cancer, to combat bad eating habits and to promote healthy lifestyles.

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