

Screen for colorectal cancer in patients with idiopathic deep vein thrombosis

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Abstract

Screening for colorectal cancer (CRC) contributes by reducing the incidence of this disease and mortality. Colonoscopy is considered the gold standard for screening for these tumors. It is well know that deep vein thrombosis (DVT) is a common manifestation in patients with cancer and may appear as the first manifestation of the disease. This study aimed to examine the association between idiopathic DVT and CRC, and to check the necessity of screening for cancer in this population. This study retrospectively reviewed the medical charts of 17 patients with idiopathic DVT but no history of CRC and of asymptomatic patients who underwent colonoscopy to screen for CRC. The presence of malignancy, all adenocarcinomas, was identified in 23.53% of the tests. The examination showed changes in 52.04% of the patients, with diverticular disease of the colon being the most prevalent (17.65%), followed by rectal ulcer (11.76%). The sensitivity of the test was low (57.2%) but the high positive predictive value was high (80%). The results suggest there is an association between DVT and CRC and thus there is a need for screening for neoplasias in subjects with DVT without a clear etiology.

Key words: Deep vein thrombosis, Colorectal neoplasms, Screening programs.

Introduction

Deep vein thrombosis (DVT) is a common manifestation in patients with cancer and may appear as the first manifestation of the disease¹. The pathophysiology of thrombus formation and coagulation in cancer is complex and reflects different mechanisms, which include activation of the coagulation and fibrinolysis systems, acute-phase inflammatory proteins, cytokine production and necrosis².

The screening of colorectal neoplasias contributes to a reduction in mortality as diagnosis is made in an early stage, the result of which is a five-year survival rate of approximately 90%³. Colonoscopy is considered the gold standard and the preferred test for colorectal cancer (CRC) screening as it allows a full examination of the colon and rectum structures in a single session in addition to

allowing the collection of samples from suspicious lesions for histopathological analysis^{3,4}.

DVT is common in patients with cancer and may appear as the first manifestation of the disease, conferring a worse prognosis, with the risk of death increasing as the interval between the DVT episode and the diagnosis of neoplasia increases^{5,6}. On comparing cancer patients, individuals with DVT have a significantly reduced survival rate (4 to 8-fold increase in the risk of death)⁷. Despite the epidemiological importance of screening and colorectal cancer there are no studies that identify any association with idiopathic DVT.

This study aimed to assess whether there is an association between idiopathic DVT and colorectal cancer.

Method

The medical charts of 17 patients with idiopathic DVT hospitalized on the ward of the vascular surgery department of Hospital de Base Medicine School in Sao Jose do Rio Preto from January 2005 to March 2010 were retrospectively evaluated in an attempt to find an association with CRC. The examinations were requested at random according to medical suspicion of the possibility of a neoplasm. The patients were asymptomatic and had no reported family history of CRC or cancer in general. The study was approved by the Research Ethics Committee of the same institution.

Results

During the study period, colonoscopies to screen for CRC were requested for 10 female and 7 male subjects diagnosed with idiopathic DVT; the mean age was 65 years old (Range: 47 - 78 years). The examination revealed no abnormalities in 47.06% of cases. Diverticular disease of the colon was the most common finding (17.65%), followed by rectal ulcer (11.76%), colonic polyps (5.88%), vegetative lesion in the rectum (5.88%), giant polyp of the sigmoid colon (5.88%) and megacolon (5.88%). Malignancies were confirmed by histopathological analysis in two men and two women (23.53% of the examinations) all adenocarcinomas.

Discussion

This study detected a high prevalence of CRC in patients with idiopathic DVT. Here the indication of the examination was not routine but due to some clinical suspicion in respect to the patient. Another important aspect of the examination is that other benign diseases not felt by the patient were diagnosed. Thus, the positivity of the exams in this evaluation was higher than 50%.

There is no consensus on screening for colon cancer in patients with idiopathic DVT. This study emphasizes the need for additional investigations of cancer in these patients. However, this is not a noninvasive test, which is one of the factors limiting its routine indication. The identification of clinical factors that hint at the presence of cancer would suggest that there is a need for this investigation to be conducted.

A publication from the same service as this study reported prevalences of cancer of 16.6% in 50 to 80-year-olds and 26.8% for the 60 to 70 year-old age group¹. This implies that greater attention should be paid to older patients. However, screening for other causes of hypercoagulability^{8,9} as well as tumor markers should also be considered. Thus, factors involved in both thrombotic events and in cancer may be identified.

CRC is the third most common cause of cancer

worldwide accounting for around 9.4% of all cases. In Brazil, incidences of 14 new cases per 100 000 men and 15 for every 100 000 women were estimated for the year 2010¹⁰.

Performing colonoscopy screening in asymptomatic individuals to detect CRC detects some alteration in about 65% of exams. In addition, the possibility of endoscopically treating the changes found, particularly polyps, may result in a decrease in the incidence of CRC¹¹. An incidence of 4.25% of adenocarcinomas colorectal was found by using the fecal occult blood screening test to indicate colonoscopy in the general population¹⁰. There are references that from 3.2% of asymptomatic individuals submitted to screening with colonoscopy are diagnosed with CRC the results of which are subsequently confirmed by biopsy¹².

In the current study, the incidence was higher with 23.53% of cases being diagnosed with adenocarcinomas; although a different methodology was used, the incidence of malignant neoplasms appears to be higher⁷.

This study has limitations, as the methodology was based on a review of the patients' charts and because of the small number of individuals constituting the study population. However, the results suggest there is a real need to investigate the incidence of CRC and premalignant lesions in patients with idiopathic DVT.

Conclusion

It is important to perform diagnostic tests such as colonoscopy in patients with idiopathic deep venous thrombosis with clinical suspicion of colon cancer.

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