USE OF ULTRASONOGRAPHY TO SCREEN FOR OCCULT CANCER IN PATIENTS WITH IDIO-PATHIC VENOUS THROMBOSIS

JOSE MARIA PEREIRA DE GODOY*, ANDRE LUIZ COZETTO DE OLIVEIRA**, ANDRESSA RIBEIRO**, FERNANDO BATIGALIA***
*Department Cardiology and Cardiovascular Surgery in Medicine School in Sao Jose do Rio Preto-FAMERP, professor of the Graduation and Post-graduation courses (Stricto-Sensu) in FAMERP-Brazil - **Resident in Medicine School in Sao Jose do Rio Preto-FAMERP-Brazil - ***Department of Anatomy in Medicine School in Sao Jose do Rio Preto-FAMERP-Brazil

ABSTRACT

Background: Patients with idiopathic deep vein thrombosis have a high enough incidence of cancer to justify an investigation of underlying malignant disorders.

Aim: This study aimed to retrospectively analyze pelvic and abdominal ultrasound as a screening method for occult cancer in patients with idiopathic deep vein thrombosis.

Method: The medical records of 120 individuals diagnosed with idiopathic deep vein thrombosis, who had been submitted to pelvic and abdominal ultrasound at admission or within 30 days after discharge, were evaluated. Results: Malignancies were confirmed by histopathological analysis in 4 patients after abnormalities suggestive of neoplasms had been identified in the examination. Four other patients without any changes at ultrasound had malignancies diagnosed by other methods.

Conclusion: Ultrasonography to screen for abdominal occult cancer in patients with idiopathic venous thrombosis is recommended.

Key words: Venous Thrombosis, Mass Screening, Cancer.

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Introduction

Patients who suffer from idiopathic Deep Vein Thrombosis (DVT) have a sufficiently high incidence of cancer (4.6% to 25%), to justify an investigation of underlying malignant disorders(1-3).

On considering all patients with cancer, those with DVT have a significant reduction in survival rates with a four - to eight-fold higher risk of death being reported(4). The diagnosis of occult malignancies in patients with idiopathic DVT by screening using different tests, including abdominal and pelvic ultrasonography, was approximately 13%. These patients were diagnosed at an early stage.

The diagnosis of occult malignancies in patients with idiopathic DVT by screening using different tests, including abdominal and pelvic ultrasonography, was approximately 13%. These patients were diagnosed at an early stage. On the other hand, where individuals are not investigated for possible malignancies after the thrombotic event, 9.8% were symptomatic within a period of 2 years and more advanced cancer was diagnosed compared to those who are submitted to screening(5).

However, the use of ultrasound in screening is still controversial(6).

This study aimed to retrospectively analyze the use of pelvic and abdominal ultrasound as a screening method for occult cancer in patients who suffer from idiopathic DVT.

Method

The hospital records of 500 patients with diagnosis of DVT hospitalized in Hospital de Base Medicine School, Sao Jose do Rio Preto in the period from January 2005 to March 2010 were evaluated. The inclusion criteria were the diagnosis of idiopathic DVT and performing abdominal ultrasonography, as shown in Figure 1, during the hospital stay or within 30 days of discharge.
Patients diagnosed with cancer and those who had previously suffered from DVT were excluded.

The study was approved by the Research Ethics Committee of the Medicine School in Sao Jose do Rio Preto. The data were analyzed by descriptive statistics analysis.

Results

One hundred and twenty individuals (66 female and 54 male) diagnosed with idiopathic DVT were enrolled in this study (mean age: 58.9 years old).

Malignancies were confirmed in 4(3.3%) patients by histopathological analysis after suspicious changes seen at ultrasound: abdominal mass in the topography of the head of the pancreas 1-(0,83%) with confirmed pancreatic cancer, renal mass (1) with histopathologic diagnosis of papillary renal cell carcinoma, rectosigmoid wall thickening with obliteration of adjacent fat (1), where further investigation showed the presence of colorectal cancer, and abdominal mass in right iliac fossa involving the iliac arteries and liver implants (1), revealing the presence of malignant neoplasms of undetermined origin.

Four (3,3%) other patients in this group without changes in the ultrasound exams were diagnosed with colorectal (2), esophageal (1) and parotid (1) cancer.

Discussion

This study shows that abdominal and pelvic ultrasound was useful in screening for cancers in patients with idiopathic DVT. Eight (6.7%) patients with occult malignancies associated with idiopathic DVT were detected by early screening using several diagnostic methods including ultrasound screening.

Thus, 50% of these cases had abnormal ultrasound examinations with malignancies.

The diagnosis of neoplasms after acute episodes of DVT, according to the literature, occurs when the cancer is in an early stage in 61% of patients submitted to screening compared to 14% of those who choose a wait and watch approach in the outpatient clinic.

This finding, coupled with the fact that tumors diagnosed in early stages have a better prognosis, highlights the need for screening for cancer in patients with idiopathic DVT. However, there are studies that consider ultrasonography inefficient as screening for tumors in patients with idiopathic DVT and so do not recommend screening.

The true result of screening for cancer on the prognosis of patients with idiopathic DVT and cancer remains unknown; although diagnosis is reached early, there are no published studies reporting the survival of these patients.

It is well known that ultrasound is a method that depends on the examiner. It is therefore possible that subtle changes go unnoticed in evaluations made by less experienced professionals. However, it is an innocuous examination, i.e. it does not harm the patient, and when a change is suspected, the patient can be screened using more accurate methods. Another important aspect is that this study identifies other benign changes thereby adding weight to indications.

Other criteria, such as age, may be useful in the screening of patients at a higher risk for cancer thereby increasing the likelihood of identifying tumors by ultrasound. One study identified a prevalence of malignancies of from 16% to 26.8% in patients with deep venous thrombosis between the ages of 50 and 80 years, with a peak (26.8%) being between 60 and 70 years old. The evaluation of other causes of hypercoagulability is also important to determine the etiology of the DVT.

Conclusion

Screening for paraneoplastic syndrome in patients with idiopathic deep venous thrombosis is recommended.
References


Request reprints from:
José Maria Pereira de Godoy
Avenida Constituição, 1306
São José do Rio Preto, SP (Brazil)