UNMASKING A YOUNG ADULT MIGRATORY DEEP VENOUS THROMBOSIS – CASE REPORT

Ralucia Haliga\textsuperscript{1,2}, V.L. Drug\textsuperscript{3}, D. Negru\textsuperscript{4}, V. Ambarus\textsuperscript{5}, Ionela Neghina\textsuperscript{5}, L. Sorodoc\textsuperscript{2}

University of Medicine and Pharmacy “Grigore T. Popa”-Iasi
Faculty of Medicine
1. Discipline of Pathophysiology
   “Scripion” Hospital, Iasi, Romania
2. Second Internal Medicine Clinic
3. Gastroenterology Department
4. Radiology Department
5. Third Internal Medicine Clinic

UNMASKING A YOUNG ADULT MIGRATORY DEEP VENOUS THROMBOSIS – CASE REPORT (Abstract): Venous thromboembolism is a known complication of cancer which impacts on patient mortality and quality of life. The primary site of cancer is an important risk factor, with highest rates observed in patients with brain, pancreas, gastric, kidney, ovary and lung cancers. The extent of metastatic spread further adds to the risk. In this article, we present the case of a young patient who was diagnosed with an aggressive form of pancreatic neoplasm with secondary determinations, without any previous digestive symptoms, with the occasion of a recurrent and migratory deep venous thrombosis (DVT). 

**Keywords:** CANCER, PANCREAS, DEEP VENOUS THROMBOSIS, RECURRENT.

Deep venous thrombosis (DVT) and pulmonary embolism (PE) are major causes of morbidity and mortality (1). Several patient's characteristics are associated with a higher incidence of venous thromboembolism (VTE) and include, among others (2), age greater than 65 years, female gender, obesity, immobility, major surgery and infection (3,4). The risk of VTE may also substantially be increased by heritable prothrombotic states such as factor V Leiden or prothrombin gene mutation or acquired conditions (e.g. antiphospholipid antibodies), in addition to a prior VTE. Cancer patients are known to be at increased risk of VTE. The primary site of cancer is an important risk factor for VTE, with highest rates observed in patients with brain, pancreas, gastric, kidney, ovary and lung cancers. The extent of metastatic spread further adds to the risk (5, 6).

We present the case of a young patient with recurrent and migratory DVT, who was diagnosed with an aggressive form of pancreatic neoplasm with secondary determinations, without any previous digestive symptoms.

**CASE PRESENTATION**

A 42 year old man, from an urban area, was admitted to our department, in October 2012 for swelling of legs, local pain, heat...
and redness, irritability, fatigue. The patient was a smoker for twenty years ago, and denied alcohol consumption. In August 2012, he was diagnosed with DVT of the left leg, and with two weeks before current admission in the hospital he was diagnosed with DVT on the right femur–popliteal axis and superficial phlebitis of the right leg, being under treatment with Acenocumarol 4 mg per day, Diosminum 500 mg 2 tablets per day and Sulodexidum 250 ULS 2 tablets per day. The patient declared loss in body weight, approximately 4 kg in the last two months.

Physical examination showed pale skins and mucosa, normal state of nutrition (BMI 23.6 kg/m²), arterial blood pressure 125/80 mmHg, heart rate 69/min, respiratory frequency 16/min. Clinical examination did not reveal any tenderness of the abdomen, liver and spleen were not palpable. Local clinical exam revealed edema, redness and heat of both legs.

Laboratory tests at admission showed leucocytosis (12,700/mm³) and neutrophilia (66.5% - 9,500/mm³), mild normochromic, normocytic anemia (Hb 12.9g/dl), dyslipoproteinemia, very increased C reactive protein (12.71 mg/dl), hyperglycemia (187 mg/dl), therapeutic hypocoagulability (INR 2.39), absence of fibrin degradation products (FDP) and increased D-dymers (21.7 µg/ml). Liver function tests revealed mild hepatocytolysis (ASAT 47 U/l, ALAT 74 U/l), cholestasis (total bilirubin 1.43 mg/dl, conjugated bilirubin 0.73 mg/dl, alkaline phosphatase 617 IU/l, GGT 751 IU/l), and normal total serum proteins. The platelet count, blood urea, creatinine, sodium and potassium, alkaline reserve, uric acid level, urinary examinations were within normal range.

The abdominal ultrasound examination revealed increased volume of liver, nodular structure, unhomogeneously overall, and presence of a small quantity of right pleural fluid, which was also confirmed radiological. The cardiac ultrasound exam evidenced normal systolic and diastolic function of left ventricle, atherosclerotic ascending aorta.

Doppler venous ultrasound revealed, on the right leg, an 8.5 mm thickness thrombus in the deep femoral vein at third inferior thigh and subcutaneous edema, absence of Doppler signal in the popliteal and posterior tibial veins, peroneal and saphenous vein until middle third of the thigh. On the left leg, in the third inferior thigh, there was detected a thrombus of 8.4 mm thickness, with partial recanalization, incompressibility and absence of Doppler signal on the posterior tibial vein, saphenous vein and veins from the posterior side of the calf.

Considering the recurrent and migratory character of DVT in a young patient, we examined the thrombophilic state, by testing possible deficiencies of antithrombin III, protein C and S, factor V Leiden and prothrombin gene mutations, lupic anticoagulant, antiphospholipid antibodies and MTHFR genes (mutations C677T and A1298C). All of these tests were within the normal range. Also for thrombotic state under chronic oral anticoagulation (with therapeutic INR), taking in consideration the young age, absence of risk factors (obesity, hip or lower limb fractures, immobility, major surgery or trauma, infection), we determined the tumor markers, which revealed increased carcinoembryonic antigen (CEA - 37.7 ng/ml) and very increased level of tumoral antigen CA 19-9 (>1000 IU/ml), with normal levels of prostate specific antigen and alpha-feto-protein.
In this stage, regarding the markedly changes in tumor markers, inflammatory tests and the ultrasound aspect of the liver, we considered compulsory an abdominal computer tomography (CT) examination, which revealed a solid and expansive tumor of pancreatic body and tail, imprecise delimited, size of 46/57/45 mm, with decreased density compared to the rest of pancreatic parenchyma in arterial and venous time (fig.1), secondary liver determinations (fig.2), thrombosis of the left portal vein, splenic artery and vein (fig.3,4), probability of splenic infarctions. There was also detected tumoral lymphadenopathy placed around the pancreatic tumor, in mesenteric and celiac area, in the splenic hilum and on the small gastric curvature.

During hospitalization, which involved primary therapy with subcutaneously anticoagulant (sodium enoxaparine), then oral anticoagulant (acenocumarol), under INR control, diosminum and sulodexidum, analgesic and anxiolytic treatment, clinical and paraclinical evolution was slowly favorable, with reduction of the legs thrombotic signs (redness, pain and swelling) and without any gastrointestinal signs or symptoms.

**Fig.1.** The pancreatic tumor does not have demarcation limit by left adrenal gland (body) and by first ileal loop

**Fig. 2.** Multiple hepatic solid lesions, with reduced vascularity, some with tendency to confluence, disseminated in both liver lobes

**Fig.3.** The splenic vene cannot be seen (completely obstruction)

**Fig.4.** Spleen artery is permeable, with present blood flow on the first 6.5 mm, being obstructed at the level of the tumor

The patient was directed to the surgical department, where, because of the advanced stage of the neoplasm, was not operated, but received recommendations to
address to oncologic department. In oncology, the patient was subjected to two chemotherapy cures, with an unfavorable evolution, the death occurring at the end of November 2012.

We consider this is an interesting medical case, in which a migratory and recurrent DVT in a young patient discovered an aggressive form of pancreatic neoplasm, with hepatic secondary determinations, without any previously digestive symptoms and with a very fast unfavorable evolution.

**DISCUSSION**

It has been recognized that venous thromboembolic events are common in patients with cancer. Patients with cancer represent approximately 15-20% of all new cases of venous thromboembolism (4). Cancer is associated with about a 3-fold increased risk of recurrent VTE both during and after anticoagulant therapy, and among patients with cancer, the risk of recurrence is about 3-fold higher in those with metastatic disease (7).

Our patient, a relatively young man, developed recurrent and migratory DVT, without any digestive symptom, abdominal pains, loss of appetite, or disorders of bowel transit, but only with about 4 kg loss in body weight in the last two months. Because of recurrent and migratory character of DVT, taking in consideration that the patient didn't have any thrombotic risk factors (normal thrombophilic state, normal state of nutrition, absence of immobility, major surgery, fracture or infection), under chronic oral anticoagulation (with therapeutic INR), our thought was to investigate a possible malignant cause of thrombosis, starting with tumoral markers, which had significant changes (especially CEA and CA19-9) and abdominal CT. Abdominal CT revealed an advanced stage of pancreatic neoplasm (T4N1M1), with secondary liver determinations, disseminated tumoral lymphadenopathies and invasion of portal and splenic veins. The diagnostic of secondary diabetes mellitus by hyperglycemic level is related to the location of the tumor into the pancreatic body and tail. Also, inflammatory state (leukocytosis and increased CRP) are related to the tumor presence, and hepato-cytolysis and cholestasis are due to secondary liver determinations and invasion of portal vein.

Recent studies showed that VTE tends to be associated with advanced and aggressive forms of cancers, while average life expectancy is poor in this group of patients (40% mortality at 6 months after diagnosis of VTE) (8). While the risk of VTE by tumor type remains uncertain for the majority of cancers, the risk appears to be highest for patients with malignant brain tumors and cancer of the ovary, pancreas, and lung (6). Multiple and interdependent mechanisms are responsible for the hypercoagulability state in patients with cancer. Tumor procoagulant activity, host inflammatory responses and extrinsic factors, which are frequently iatrogenic, are involved. Furthermore, recent evidence has shown that tumor-induced coagulation activation is intrinsically involved in tumor cell growth, angiogenesis and metastasis (2).

In conclusion, admitting that there are cases of cancer associated with DVT, by this report we want to draw attention on the fact that, in a young patient with recurrent DVT, without any apparent risk factor for thrombosis, attention should be higher to check for a thrombophyllic state or for an active malignancy, even in the absence of signs or symptoms of organ sufferance.
REFERENCES


PERIODONTAL STATUS OF PATIENT'S UNDERWENT HEMODIALYSIS THERAPY

The patients with chronic renal failure undergoing hemodialysis are susceptible to periodontal diseases due to systemic complications of the disease and using different drugs. A group of researchers from the Department of Periodontics of Babol University of Medical Sciences, Iran investigated the periodontal status of patient's who underwent hemodialysis. The study realized in Shahid Beheshti Hospital in Babol, Iran included one-hundred-fifteen hemodialysis patients (63 males and 52 females) with the mean age of 47.9±15.3 years. Periodontal parameters (plaque index, gingival index, clinical attachment level and probing pocket depth) were measured. The data were registered and analyzed. The plaque index, gingival index, clinical attachment level and probing pocket depth were 2.37±0.55, 2.36±0.63, 3.98±1.61 and 4.41±1.4, respectively. Significant positive correlations were found between the participants' age and plaque index (p<0.024) and p<0.001, respectively. Clinical attachment level was significantly higher in males (4.39±1.57) than females (3.53±1.56), p<0.02. The obtained data revealed that, especially in males, a longer duration of hemodialysis is associated with severe periodontal diseases. (Jenabian N, Ghazi Mirsaeed AM, Ehsani H, Kia-kojori A. Periodontal status of patient's underwent hemodialysis therapy. *Caspian J Intern Med*, 2013; 4 (2):658-661).

*Irina Grădinaru*