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Case Report

Deep vein thrombosis - Preneoplastic?- need to evaluate for malignancy

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Abstract

Deep vein thrombosis (DVT) in the leg veins has been found to be increasing in incidence during the last 5 to 6 years partly due to improved awareness and accessibility to Doppler Ultra sonogram but also after Covid-19 Pandemic. Our patient presented with deep vein thrombosis bilaterally in the femoropopliteal veins 4 years ago when she was screened for occult malignancy and thrombophilia. She was under regular follow up and maintained on therapeutic anticoagulation. Now she presented with neck nodes and evaluation showed evidence of Hodgkin's lymphoma, which has been well treated with chemotherapy and achieved remission.

Keywords: Deep vein thrombosis, Occult malignancy, Lymphoma, Trousseau syndrome.

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1. Introduction

Deep vein thrombosis (DVT) in the leg veins has been found to be increasing in incidence during the last 5 to 6 years partly due to improved awareness and accessibility to Doppler Ultra sonogram but also after Covid-19 Pandemic. Trousseau syndrome known as migratory thrombosis is known to occur, often due to Paraneoplastic syndrome secondary to pancreatic malignancy. The incidence of occult malignancy is 7%–12% in patients with idiopathic deep vein thrombosis (DVT).[1] The incidence of cancer is high after first-ever VTE, especially close to the VTE event. VTE seems to be a stronger risk marker in women than in men for both cancer and death.[2]

We present a patient with deep vein thrombosis bilaterally in the femoropopliteal veins 4 years ago and then found to have lymphoma and now treated to achieve remission.

2. Case Report

48 years old female presented with right leg swelling for 5 days with pain and after clinical examination she had Doppler US scan that showed popliteal vein deep vein thrombosis. She had basic screening with bloods and Chest X ray and Ultrasound abdomen that all returned normal. While she was anticoagulated with warfarin, she developed left leg swelling that turned out to be femoral vein thrombosis. She was again screened for suspected malignancy and her sonogram, blood count and other blood tests were normal. Her mammogram, uterine scan and colposcopic biopsy were normal.

Her antiphospolipid antibody screen, thromobocheck profile was found to be normal. Hence no cause was found for bilateral DVT and she was fully anticoagulated with acitrom.

After 4 years, she then presented with neck swelling and fever. She had no history of weight loss or gastro symptoms or respiratory symptoms. There was no history of contact with positive TB patients.

Examination showed bilateral cervical adenopathy, few axillary adenopathy and splenomegaly. Breast exam was normal. There was no leg swelling. Investigation showed neutrophilia, CRP and ESR raised D Dimer 526 mg/ml, LDH 740 mg/dl, liver and renal function was normal. CT scan showed cervical, hilar and paraaortic adenopathy and splenomegaly. Lung and liver parenchyma were normal.

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She was subjected to lymphnode biopsy with HP exam and immunohistochemistry too. Biopsy showed features of follicular hyperplasia due to lymphoproliferative disorder, IHC showed non Hodgkin's lymphoma. PET CT showed features of stage III disease. (Cervical, hilar, spleen involved). (**Figure 1**) She also had her thyroid nodule biopsied which showed colloid nodule of thyroid and she was clinically euthyroid. She also kept cool and calmness in this whole process of evaluation and initiation of treatment.

She was given chemotherapy (CHOP Regimen) and interval PET CT showed partial remission and after 6 cycles of chemotherapy, she achieved remission both clinical and also by PET imaging. She continues to be adequately anticoagulated. She expressed happiness in this process.

Figure 1: PET CT showing features of stage III disease

3. Discussion

48 years old lady with bilateral femoropopliteal DVT after 4 years of follow up, developed Lymphoma and early diagnosis with appropriate chemotherapy resulted in achieving complete remission.

Lower limb DVT especially femoral DVT has high likelihood of embolisation and result in pulmonary embolism. Also recurrent or bilateral DVT must raise suspicion of thrombophila or occult malignancy that warrants adequate and appropriate screening. It's important that patients who don't have evidence of malignancy should be followed up so that we can diagnose any cancer if it were to produce symptoms early. Literature evidence suggest paraneoplastic manifestations of neoplastic process include DVT and it can precede the clinically evident cancer.[3] While the *highest* risk is in the short term, some large studies have indicated a slightly elevated risk of mortality from certain cancers (e.g., colon, pancreas, kidney) even 1-5 years and more than 5 years after a DVT diagnosis, suggesting a potential long-term association or shared underlying risk factors.[4] PTS is a chronic venous insufficiency secondary to DVT, caused by dynamic venous hypertension resulting from residual venous emboli and/or valve damage.[5]

The risk of cancer diagnosis in DVT patients after two years is generally considered comparable to that in the general population and hence our patient may have developed de novo cancer but bilateral DVT is a cause for concern.[6] Hence a simple clinical evaluation comprised of medical history, physical examination, routine laboratory tests, and chest X-ray can detect such patients.[7] Extensive screening of all patients presenting with unexplained DVT does not appear to be justified and not cost effective.[8]

4. Conclusion

Deep vein thrombosis without known cause needs regular follow up and if age more than 45 we need to evaluate for internal malignancy. Paraneoplastic DVT is not uncommon. Early diagnosis will pave the way for achieving early and adequate remission of cancer. Adequate screening and appropriate early diagnosis coupled with active remission inducing treatment approach should be the way forward.

5. Source of Funding

None.

6. Conflict of Interest

None.

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