

## Primary Osteolytic Tumor Revealing A Deep Vein Thrombosis Of The Right Lower Limb In One Case

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Received: 07 August 2020; Accepted: 30 August 2020

**Citation:** Morlaye S, Sory BI, Aly S, et al. Primary Osteolytic Tumor Revealing A Deep Vein Thrombosis Of The Right Lower Limb In One Case. *Cardiol Vasc Res.* 2020; 4(3): 1-4.

### ABSTRACT

**Introduction:** Venous thromboembolism is a unique entity which groups together two main clinical expressions: deep vein thrombosis (DVT) and pulmonary embolism (PE) Deep vein thrombosis of the lower limb is a multifactorial disorder characterized by the formation of a thrombus of fibrino cruori which can be partial or total [1]. Objective of this study was to make a detailed description of this disease association.

**Observation:** He is a 65-year-old farmer from the village of Coyah, height = 1.67cm, weight = 58 kg, Admitted to our department on January 02, 2020 for: Painful swelling of the lower right limb, palpitations, headache, vertigo, asthenia physical, anorexia all evolving for a month with a history of arterial hypertension for more than 5 years irregular treatment, no history of family tumor, no active or passive smoking, hypertensive under Coveram10 / 10mg (Ramipril / Amlodipine).

**Discussion:** The incidence of VTE in cancer remains difficult to know due to the heterogeneity of this population and the difficulty of conducting large epidemiological studies [7]. Our results are identical to those of the literature. Cancer is the third leading cause of VTE (20%) in the general population, after surgery (24%) and bed rest (22%) [8]. VTE affects 10 to 20% of cancer patients. It is the second leading cause of death in these patients.

**Conclusion:** The relationship between thrombosis and cancer, first described nearly 150 years ago by French physician Armand Trousseau, is still relevant today. The significant improvement in our knowledge in this field makes it possible to optimize anti-thrombotic prophylactic strategies which will therefore also be, to a certain extent, antineoplastic. Thus, the control of coagulation during cancer not only prevents vascular complications but it could also potentially reduce tumor progression, metastatic spread and even prolong the survival of these patients.

### Keywords

Tumor, Osteolytic, Thrombosis, Venous.

### Introduction

Venous thromboembolism is a unique entity which groups together two main clinical expressions: deep vein thrombosis (DVT) and pulmonary embolism (PE) Deep vein thrombosis of the lower limb is a multifactorial disorder characterized by the formation

of a thrombus of fibrino cruori which can be partial or total [1]. Primary bone tumors are rare and can be divided into two groups. Primary malignant bone tumors represent less than 1% of cancers. They develop especially in children and adolescents as well as in young adults. After 50 years, they should be the first to think of metastasis. Benign bone tumors are more common and can be seen at any age although they are most commonly seen in children, adolescents and young adults. As with any bone tumor, it is first

and foremost important to know the nature histological in order to undertake an appropriate treatment. This histological nature can only be known after bone biopsy in a number of cases [2].

The clinical signs of primary bone tumors have no specificity. Pain is the most common calling sign. It has no particular or specific character. Its onset can be both diurnal and nocturnal and its appearance both mechanical and inflammatory. The existence of a palpable swelling is another revealing circumstance and is only seen, however, in areas where the bony elements are superficial. The last revealing circumstance is represented by the pathological bone fracture. It is important to say that all of these three revealing circumstances are in no way specific and can in no way give diagnostic guidance. The diagnosis can be clarified by a few additional examinations [2]. The association between deep vein thrombosis (DVT) and cancer is a common clinical situation, known worldwide as "Trousseau syndrome". It was first described in 1865 by the French physician Armand Trousseau (1801-1867) [3]. At this time, he published clinical observations describing unexpected VT, unusual and sometimes migratory presentations in patients who later manifest visceral neoplasias [4].

The relationship between thrombosis and cancer is in fact reciprocal: cancer predisposes to the onset of thrombosis and the development of the tumor process is linked to this state of hypercoagulability; but the physio-pathogenic mechanisms have not yet been fully elucidated. As for the treatment of thrombosis associated with cancer, numerous studies published during the last decade have led to significant therapeutic changes in this field [5]. The occurrence of a thromboembolic event (TEE) is more common in patients with contributing factors, but sometimes patients without any risk factors may present. Sometimes the first episode of a TEA can detect and diagnose one or more risk factors, such as abnormal hemostasis or cancer. From the 19th century Rudolph Virchow proposed 3 factors favoring VTE, which interact with each other:

- blood stasis.
- venous endothelial lesion.
- changes in hemostasis due to hypercoagulability, hyperviscosity or thrombophilia. These three factors are found, to varying degrees, in the various identified risk factors [6].

### Observation

He is a 65-year-old farmer from the village of Coyah, height = 1.67cm, weight = 58 kg, Admitted to our department on January 02, 2020 for: Painful swelling of the lower right limb, palpitations, headache, vertigo, asthenia physical, anorexia all evolving for a month with a history of arterial hypertension for more than 5 years irregular treatment, no history of family tumor, no active or passive smoking, hypertensive under Coveram 10 / 10mg (Ramipril / Amlodipine). On clinical examination objectively conscious patient cooperative passive attitude with general condition can satisfactory temperature 36°C, Cardiovascular system heart sounds audible and regular sound synchronous with peripheral pulses at 96 beats per minute no added noise no arrhythmia no of murmur no

sign of heart failure TA = 180/110 mmhg. Lungs are free with an SPO<sub>2</sub> = 98% in ambient air. Supple abdomen without palpable pathological mass. Musculoskeletal system We note a stiffness and painful swelling of the lower right limb, positive Homas sign. Elsewhere, the expanded review on other devices remains unremarkable.

### Paraclinical examination

The 12-lead surface electrocardiogramme.

The ECG: which objectified sinus tachycardia at 103 cycles per minute, QRS axis on the left, the PR at 0.16s constant, Cornell's index at 38 mm, disorder of secondary ventricular repolarization.

### Scanned frontal chest x-ray

Showed multiple rounded opacities on balloon release invading both lung fields.

### Abdomino-pelvic ultrasound

Homogeneous hepatomegaly with moderate dilation of the hepatic and portal veins: Appearance in favor of a cardiac liver.

- Muddy gall bladder with thickened wall with sensitivity to the passage of the probe without image of cholestasis and a perivesicular fluid slide in favor of cholecystitis.
- Absence of pancreatic and splenorenal morphological lesion
- No ultrasound argument in favor of a CPF.

### Cardiac doppler ultrasound

Revealed moderate dilation of the OG and LV with good biventricular systolic function FE = 52% at teicholtz TAPSE = 22 mm.

- Difficulty of LV relaxation.
- Normal LV filling pressure.

### Venous ultrasound of the lower limbs

Presence of venous thrombosis of the femoral vein common to the deep and superficial femoral vein as well as the origin of the right long saphenous vein.

### Thoraco-Abdomino-Pelvic scanner

- Voluminous osteolytic tissue mass of the trochanters and the right femoral neck partially reaching the femoral head with suspected malignancy to correlate with histology.
- Multiple right inguinal, right iliac, lumbo-aortic and mediastinal lymphadenopathy of secondary appearance.
- Right pleural effusion with subpleural nodules in favor of pleuropulmonary metastases.
- Thrombosis of the external iliac vein.

### I.D.R = Intra Dermoreaction with tuberculin

Tested negative Gastric tubing: The result of gastric tubing is negative.

### Anatomo-pathological analysis of the bone biopsy

Reveals the presence of giant cells lymphocytic osteoblastic cells.

### Biology

Red blood cells = 3.2 T, Hemoglobin = 11 U / L, Hematocrit = 33%, MCV = 75.7 fl, TCHM = 23.7 Pg / GR, CCMH = 29.1%,

Leukocytes = 28, Lymphocytes = 12, 7, Neutrophils = 2.0 Platelets = 145, T HIV = negative, AgHbs = negative, Fasting blood glucose = 0.90 g / l, Urea = 123 Creatinine = 1.14 mg / dl, GOT transaminases = 3.01, GPT = 34.12, Calcemia = 5.34mmol, Magnesemia = 1.39, TP = 50%, INR = 1.10, Blood ionogram: Chlorine = 107.32mg, Potacium = 3.3mg, Sodium = 5.33mg, TE = negative, ASLO = positive, CRP = 64 IU, GE + dp = Positive Plasmodium, Widal TO = 1/400 IU, TH = 1/400 IU.

## Discussion

The incidence of VTE in cancer remains difficult to know due to the heterogeneity of this population and the difficulty of conducting large epidemiological studies [7]. Our results are identical to those of the literature. Cancer is the third leading cause of VTE (20%) in the general population, after surgery (24%) and bed rest (22%) [8]. VTE affects 10 to 20% of cancer patients. It is the second leading cause of death in these patients [9]. Our case is similar to that of literature. The risk of VTE is multiplied by 4 in cancer patients and by 6 in the event of associated chemotherapy [10]. In practice, there is no contraindication to the use of D-dimers in cancer patients They still have a place in the diagnostic strategy, in certain situations and when they are combined with a blood test. clinical probability, to rule out DVT. But the cost-effectiveness of this test, if we evaluate it for example in number of patients to be tested to rule out an VTE, is clearly lower than in populations of patients free from Cancers [11]. In our series the D-Dimer was not assayed because the tumor had evolved with pulmonary metastases which could decrease the specificity of the examination. Doppler ultrasound of the vessels is the method of choice for the diagnosis of DVT and is the first-line examination in the diagnostic strategy. It is easily accessible, fast, inexpensive and simple to produce, non-invasive, non-irradiating. Its performance is excellent with a sensitivity of 100% and a specificity of 93% [12].

In our case, the venous doppler ultrasound of the lower limbs was performed immediately after the clinical suspicion to confirm or refute this suspicion, the existence of 'DVT is demonstrated by the discovery on ultrasound of the non-compressible nature of the vein, associated with dilation of the latter and / or the direct visualization of the thrombus. Exploration of the ilio-caves, or even femoro-popliteal axes, can be done by CT angiography at the same time as the exploration of the pulmonary arteries. Diagnosis is based on the demonstration of a central or adherent intra-luminal defect, associated with venous enlargement. In case of sequelae of thrombosis the veins are small with a thickened wall, heterogeneous enhancement or even calcifications. It requires, however, good renal function, its sensitivity is 100% and its specificity is 96% [8,9].

In our series, the performance of this examination of the thoraco-abdomino-pelvic CT angiography looked for other sites of thrombi which revealed a DVT and an osteolytic tumor of the head of the right femur with pulmonary metastases. As part of the treatment, our patient benefited from a heparinotherapy based on lovenox 6 ml times two a day every 12 hours for three days in combination with the anti vitamin k (sintrom 4 mg) at a rate of 4 mg per day and

on the fourth day a TP and INR was achieved TP = 35% and INR = 1.22. Faced with these results we stopped the lovenox for lack of means and continue with the sintrom 4mg at a rate of 6 mg per day and the patient was referred to the oncology department for better care. Five days before his hospitalization in oncology, the patient died in a picture of cardiogenic shock.

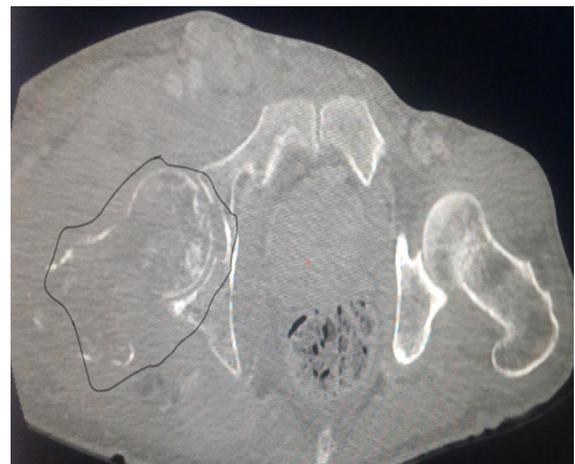
## Conclusion

The relationship between thrombosis and cancer, first described nearly 150 years ago by French physician Armand Trousseau, is still relevant today. The significant improvement in our knowledge in this field makes it possible to optimize anti-thrombotic prophylactic strategies which will therefore also be, to a certain extent, antineoplastic. Thus, the control of coagulation during cancer not only prevents vascular complications but it could also potentially reduce tumor progression, metastatic spread and even prolong the survival of these patients.

## Iconography

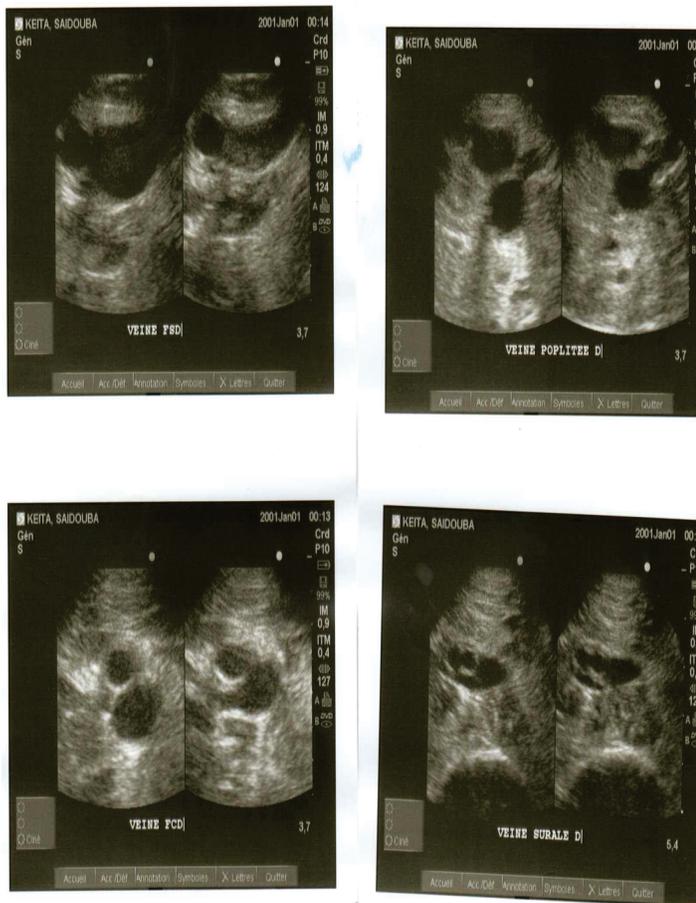


**Figure 1:** Scanned frontal chest x-ray: Showed multiple rounded opacities on balloon release invading both lung fields.



**Figure 2:** Thoraco-Abdomino-Pelvic scanner: - Voluminous osteolytic tissue mass of the trochanters and the right femoral neck partially reaching the femoral head with suspected malignancy to correlate with histology.

- Multiple right inguinal, right iliac, lumbo-aortic and mediastinal lymphadenopathy of secondary appearance.
- Right pleural effusion with subpleural nodules in favor of pleuropulmonary metastases.
- Thrombosis of the external iliac vein.



**Figure 3:** Venous ultrasound of the lower limbs.

Presence of venous thrombosis of the femoral vein common to the deep and superficial femoral vein as well as the origin of the right long saphenous vein.

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