

## Upper Limb Thrombosis Revealing Gastric Adenocarcinoma in A Young Patient

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Received: 25 November 2022; Accepted: 06 December 2022

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### ABSTRACT

The association between thromboembolic disease and cancer is frequent. Unusual localizations require an exhaustive etiological assessment, with the search for an occult neoplasia. We report the case of a young patient with no digestive symptoms who presented with an unusual upper limb thrombosis revealing gastric adenocarcinoma.

**Keywords:** Cancer, Thromboembolic Disease, Gastric Adenocarcinoma

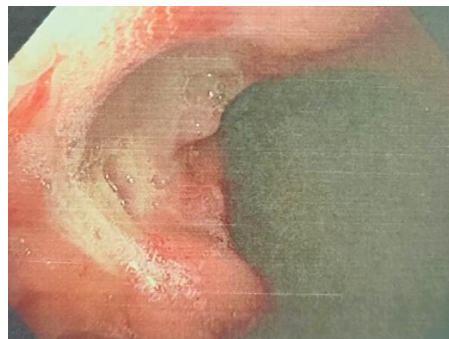
### Introduction

Cancer patients are at high risk for thrombotic events, known as Trousseau syndrome. Although deep vein thrombosis (DVT) has been described in gastric carcinoma, it is rare. DVT in gastric carcinoma is usually seen in the lower extremities. Involvement of the deep veins of the upper limbs is a rare presentation. We report the case of a young patient with no digestive symptoms who presented with an unusual upper limb thrombosis revealing gastric adenocarcinoma.

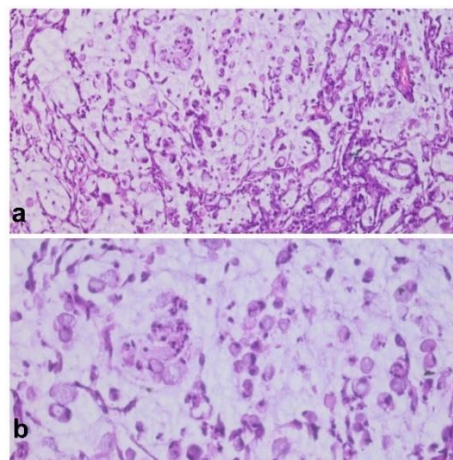
### Observation

A 43-year-old patient, non-smoking, with a history of three miscarriages at less than 12 weeks of amenorrhea and a fetal death in uterus (FDIU), admitted to the service for etiological assessment of a thrombosis of the deep vein of the left upper limb extends from the left internal jugular vein to the proximal third of the left humeral vein. Clinically, the patient was asymptomatic and in good general condition, her clinical examination was unremarkable apart from a slight palpable goiter. Antinuclear antibodies as well as anti phospholipid antibodies were requested that came back negative. The complement C3 and C4 are not consumed. The dosage of protein C and protein S as well as antithrombin

III was normal. There was a mild inflammatory syndrome with CRP at 12.7 mg/l, normochromic microcytic anemia at 11.3 g/dl, leukocytes at 6140/mm<sup>3</sup>, lymphopenia at 880/mm<sup>3</sup>, and platelet count at 439,000/mm<sup>3</sup>. Renal, hepatic and thyroid function were normal. The dosage of tumor markers was normal (CA 19-9, CA 15-3, CA 125, Alpha feto-protein). Faced with the negativity of this initial assessment, an assessment in the sense of a neoplasia was requested and in particular a cervical ultrasound which highlighted multiple adenopathies jugulo-carotidiennes left with a multinodular goiter whose largest nodule was classified EU-TIRADS 2. An echo-mammography performed came back normal. Cervicovaginal smear was unremarkable. A thorco-abdomino-pelvic CT scan showed multiple bilateral latero-aortic and mesenteric adenopathies, the largest of which was located in the left latero-aortic measuring 21 mm on the short axis with infiltration of the mesenteric fat. An upper fibroscopy was therefore performed, and revealed a large ulcer of the antrum measuring approximately 2 cm (Fig. 1). The anatomopathological study (Fig. 2) of this ulcer found chaton-ring cell adenocarcinoma of the stomach. The diagnosis of gastric neoplasia at the metastasis stage was retained and the patient succumbed to her cancer after 1 month.



**Figure 1:** large ulcer in the antrum.



**Figure 2:** Chaton-ring cell adenocarcinoma: juxtaposed cells without architectural organization, mucus vacuole pushing back the nucleus (a: original magnification x20, b: original magnification x40).

## Discussion

The term "Trousseau's syndrome" is defined as unexplained thrombotic events that precede the diagnosis of an occult visceral malignancy, or appear concurrently with the tumor (Bao *et al.*, 2020). A growing body of evidence has demonstrated a strong association between cancer and venous thromboembolic disease (VTE). Numerous studies have treated this issue and post-mortem studies have demonstrated a markedly increased incidence of thromboembolic disease in patients who died because of a malignancy, particularly those with mucinous carcinomas of the pancreas, lungs and gastrointestinal tract (Prandoni and Piccioli, 1997). VTE is the most common clinical presentation of cancer-associated thrombosis, it includes both DVT and pulmonary embolism (PE). It has been shown to occur in 4-20% of cancer patients (Khorana *et al.*, 2007). On the other hand, approximately 20% of patients with symptomatic DVT have a known active malignancy (Lee, 2005). The prevalence of occult cancer varies between 1.2 and 12% in patients with an apparently unprovoked first episode of VTE (Benhamou *et al.*, 2021). The rate of diagnosis of occult cancer is multiplied by 3 in the 6 months following the thromboembolic event compared to a population of the same sex and same age without VTE (Sørensen *et al.*, 1998). There are several studies including one out of 108 patients, with gastric carcinoma, where lower limb DVT was established in 37% of cases (Zyrianov *et al.*, 1990). However, a few case reports of upper limb thrombosis associated with gastric neoplasia have been reported (Sakakibara *et al.*, 1999; Toratani *et al.*, 2017; Kayacan *et al.*, 2008). Jugular venous thrombosis was also reported in a few cases (Toratani *et al.*, 2017; Richardson-May *et al.*, 2017; Stern-Sträter *et al.*, 2008). A case of venous thrombosis of the upper limb has been reported in the literature revealing a gastric carcinoma in a young patient who had only occasional attacks of gastric burns (Vikram *et al.*, 2010). Our patient had no digestive symptoms that could point to a gastric origin. The history of miscarriages and FDIU as well as her relatively young age pointed more towards an antiphospholipid syndrome. It was not until the discovery of multiple left abdominal and cervical adenopathies on the imaging that fibroscopy was performed. A complete assessment should always be made when discovering an unusual seat thrombosis, even without warning signs, because neoplasms can be silent and only be revealed at the stage of metastases, such as the case of our patient.

## Conclusion

The association between venous thromboembolic disease and cancer is not uncommon. Any venous thrombosis, especially unusual ones, requires an exhaustive etiological assessment, with search for occult neoplasia even in the presence of a young asymptomatic patient in good general condition.

**Declaration of Interests:** No conflicts of interest to declare.

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