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Intestinal pseudo-obstruction revealing a thrombosis of the superior mesenteric vein in a pregnant woman

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Abstract
Pregnancy is an isolated risk factor for thromboembolic disease, but when combined with thrombophilia, the results can be very serious. A 23-year-old pregnant woman admitted for intestinal pseudo-obstruction. Radiological investigations showed superior mesenteric vein (SMV) thrombosis which quickly evolved towards a mesenteric venous infarction. Etiological assay results showed a deficit in protein C. The evolution towards death despite the rapidity of management is evidence of the seriousness of this pathology, especially when there is a complete obstruction of the SMV. Thrombophilia test is often positive in this context.

Keywords: pregnancy, thrombophilia, mesenteric vein thrombosis

Introduction
Venous thrombosis is a classic complication of pregnancy and postpartum (up to 3%). The diagnosis of splanchnic vein thrombosis may be more difficult to discuss if the physician is not confronted with such a situation in the pregnant woman.

Case Presentation
A 23-year-old pregnant woman - 26 weeks of amenorrhea - admitted for intestinal pseudo-obstruction. Three days before admission, the patient was initially admitted in obstetrics and gynecology department for abdominal pain and was treated symptomatically. The patient was readmitted in emergency department for increased abdominal pain with vomiting and constipation. Clinical examination found conscious patient, pale, discolored conjunctiva, temperature at 36.8 °C, blood pressure at 100/60 mmHg, respiratory rate at 22 cycles / min, heart rate at 98 bpm, presence of lower leg edema taking the scoop. Abdominal examination found a sensitivity of the left hypochondrium with tympanism, intestinal water-borne sounds were well perceived. The rest of the clinical examination was normal.
Plain abdominal radiography showed signs of intestinal obstruction: hydroaeric levels (Fig 1). Abdominal Doppler ultrasound showed thrombosis of the superior mesenteric vein. The CT angiography of the abdomen showed bowel distention with complete thrombosis of the superior mesenteric vein (Fig 2). The patient had a biological inflammatory syndrome and thrombophilia test showed a Protein C deficiency. She was initially treated with low molecular weight heparin.
The evolution was marked by a vaginal delivery of a premature infant who died at 24 hours interval. The patient's clinical condition quickly deteriorated with worsening of its digestive symptomatology, as well as aggravation of the hyoalbuminemia (albumin at 9 g / l) requiring intravenous infusion of albumin.
The abdominal CT angiography for control showed diffuse bowel wall edema with persistent thrombosis (Fig 3). Despite effective anticoagulation, the progression to a mesenteric infarction was inevitable, and unfortunately the patient died, 48 hours later.

Fig 1: Plain abdominal radiography showing hydroaeric levels

Fig 2: CT scans with venous delay showing bowel distention with complete thrombosis of the SMV.

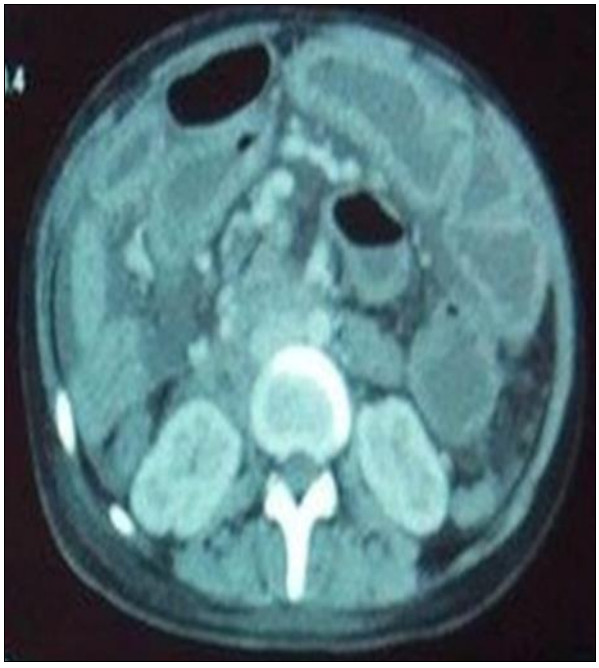

Fig 3: CT scan showing diffuse bowel wall edema.

Discussion

Mesenteric venous thrombosis (MVT) was first recognized by Eliot a century ago and has been well described by Warren and Eberhard since 1935. The evolution towards death because of fatal intestinal ischemia despite the rapidity of management is evidence of the seriousness of this pathology.

Pathophysiology and treatment have been well defined in recent decades. The initial classification of primary or secondary disease, based on the presence or not of known etiological factors, has in fact added very little to clinical decision-making [1].

Whether thrombosis occurs during pregnancy or not, the clinical presentation is usually important but not specific: the pain is intense, localized in the epigastrium, the right flank or hypochondrium accompanied by nausea and sometimes vomiting [2, 3, 4, 5, 6]. Some patients had more atypical symptomatology such as abdominal mass or were completely asymptomatic [7]. The clinical presentation of mesenteric venous thrombosis depends on the initiating thrombotic site and its rapidity of spread. Most patients with mesenteric venous thrombosis experience a slow worsening of symptoms and usually present at least 48 hours after the initial symptoms. The pain is often diffuse and colonic [1].

Gravity is related to the interruption of venous flow. Clinical presentations range from acute, to very subtle chronic symptoms, depending on the rhythm of thrombosis and the specific venous segments involved. When Intestinal venous drainage is preserved, there is generally no complication.

When there is complete obstruction of the superior mesenteric vein, as in our patient, the clinical presentation may be that of mesenteric venous infarction, a rare but dramatic situation [4, 5, 6]. As the SMV thrombosis, back pressure builds as arterial supply to the bowel is uninterrupted. This leads to bowel wall edema and possible intramural hemorrhage. Depending on the how complete occlusion is, and whether or not collateral drainage is available, the combination of back pressure, and bowel wall thickening can lead to inadequate tissue perfusion leading to intestinal ischemia, infarction and eventual necrosis [8]. The authors insist in this case on the diagnostic difficulty.

Mesenteric infarction resulting from a mesenteric venous thrombosis represents less than 20% of all bowel infarctions and it is undoubtedly a distinct entity to be distinguished from other causes of mesenteric infarction [9, 10].

Immediate heparinization upon diagnosis of mesenteric venous thrombosis (MVT) is currently accepted as standard therapy. It is recommended that patients with acute MVT and a temporary risk factor receive 3 to 6 months of anticoagulation with antivitamine K, whereas lifelong therapy is advised for those whose thrombosis is believed to be idiopathic or who are expected to have thrombophilia or certain systemic conditions [11].

Conclusion

Pregnancy is an isolated risk factor for thromboembolic disease. However, when it comes to a splanchnic vein thrombosis, thrombophilia screening has to be systematically performed.

A complete obstruction of the superior mesenteric vein can lead to mesenteric venous infarction; a rare situation but with dramatic consequences.

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