Causa inesperada de lumbalgia en una embarazada

Unexpected cause of low back pain in pregnant woman

João D. Faustino, Raquel Vieira, Sérgio Monteiro, Cláudia Rosado
Internal Medicine Service. Unidade Local de Saúde da Região de Aveiro. Aveiro (Portugal)

ABSTRACT

Wunderlich Syndrome is a rare disease defined as spontaneous bleeding confined to the subcapsular and perirenal spaces in the absence of trauma. There are some potential causes to this spontaneous bleeding such as renal neoplasms and renal vascular diseases. Usually patients present with abdominal or flank pain and they can be feverish and nauseated. Such findings are easy to sugest kidney infection, acute renal colic ou gastrointestinal disease. On the other hand, in a pregnant patient probably musculoskeletal etiology comes first in mind.

With this clinical case we bring a rare cause of low back pain and its steps through different differential diagnosis and treatments till confirmation of Wunderlich Syndrome by anatomical pathology result after total nefrectomy.

Keywords: Low back pain, pregnancy, kidney, hemorrhage.

RESUMEN

El síndrome de Wunderlich es una enfermedad poco frecuente que se define como una hemorragia espontánea limitada a los espacios subcapsular y perirrenal, sin que haya habido traumatismo previo. Existen algunas causas potenciales de esta hemorragia espontánea, como las neoplasias renales y las enfermedades vasculares renales. Por lo general, los pacientes presentan dolor abdominal o en el costado y pueden presentar fiebre y náuseas. Estos síntomas pueden sugerir fácilmente una infección renal, un cólico renal agudo o una enfermedad gastrointestinal. Por otro lado, en una paciente embarazada, probablemente lo primero que se baraja es una etiología musculoesquelética.

Con este caso clínico presentamos una causa poco frecuente de dolor lumbar y los pasos seguidos a través de diferentes diagnósticos diferenciales y tratamientos hasta la confirmación del síndrome de Wunderlich mediante el resultado de anatomía patológica tras una nefrectomía total.

Palabras clave: Lumbalgia, embarazo, riñón, hemorragia.

INTRODUCTION

Carl Wunderlich first described Wunderlich Syndrome (WS) in 1856 as spontaneous bleeding confined to the subcapsular and perirenal spaces in the absence of trauma[1]. Patients usually present with Lenk's triad: abdominal/flank pain, palpable mass in the flank and hypovolemia. Concomitantly, they may present with nausea/vomiting, skin pallor and fever.[2]

Renal neoplasm and vascular disease of the kidney are the most common causes of WS. Angiomyolipoma (AML) and renal cell carcinoma are the most common benign and malignant neoplasms, respectively, to cause this syndrome[3]. Other etiologies include vasculitis (*Polyarteritis Nodosa*), aneurysms, arteriovenous malformations, venous thrombosis, renal cysts, renal infections and coagulation disorders.[4]

We present a case of this rare syndrome that occurred during pregnancy.

CLINICAL CASE

We present a 39-year-old woman with a 8-week pregnancy and history of smoking, chronic gastritis and depression. She was medicated with Pantoprazole 20mg id, Hydroxyzine 12.5mg id and supplementation with iodine, iron and folate.

She went to the emergency department (ER) with right low back pain initiated several hours before, without trauma or any other associated symptoms. She was discharged after intravenous paracetamol and given oral paracetamol at home. Two days later, she returned to the ER with severe right back pain refractory to medication, apyretic and hemodynamically stable. A renovesical ultrasound (RV-echo) showed a nodular image in the upper pole of the right kidney with 82 mm in diameter, heterogeneous in texture and with no positive Doppler signal suggestive of intra-cystic hemorrhage. She stayed overnight in the ER due to difficult pain control and repeated the RV-echo the following day due to new anemia (Hb 8.0g/dL). Her coagulation study was normal and de RV-echo showed a slight increase in the nodular formation with a slight homolateral pleural effusion (Figure 1). The study was complemented by abdominal computed tomography (CT) which confirmed the existence of a spontaneously hyperdense lesion in the right perirenal area measuring around 127 x 91 x 75 mm which, after contrast, both in the arterial and venous phases, showed a small flush in the medial aspect of the renal upper third, with no definition of the vessel of origin. These aspects were consistent with an exophytic lesion, with a possible starting point in the lower half of the kidney. CT also showed moderate perirenal effusion with thickening of the anterior and posterior pararenal fasciae. Overall, these imagiological findings were in favor of Wunderlich syndrome with no clear definition of its cause (Figure 2).

Correspondencia: joaodmfaustino@gmail.com
Cómo citar este artículo: Faustino JD, Vieira R, Monteiro S, Rosado C.
Unexpected cause of low back pain in pregnant woman. Galicia Clin 2026; 87-1: 15-17.
Recibido: 30/09/2024 ; Aceptado: 06/04/2025 // https://doi.org/10.22546/87/1/1357

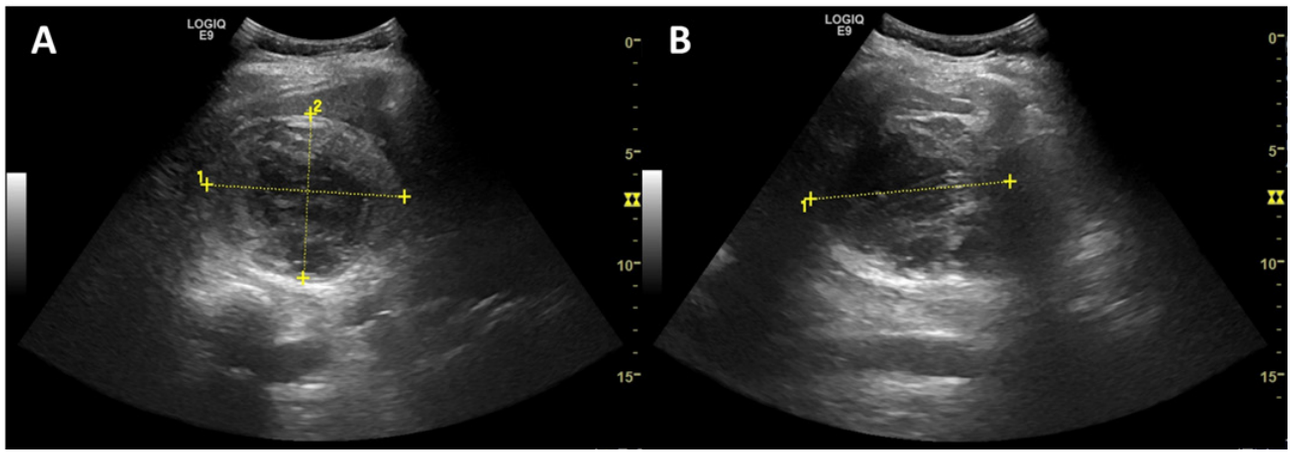

Figure 1. First RV-echo performed on admission leading to the suspected diagnosis of WS. A well-defined, heterogeneous nodular formation with a central cystic area, without detectable vascularization, measuring approximately 88 x 88 x 73 mm, with no surrounding collections, was observed in the right adrenal locus

She was admitted to Urology for 10 days, where she was transfused with 1 unit of erythrocyte concentrate and completed 7 days of empirical Ceftriaxone due to Reative C-Protein (RCP) 27.9mg/dL and CT findings of perirenal edema and thickening of the pararenal fascia, with the rational to treat a possible nephritis/pyelonephritis as the cause of the intrarenal hemorrhage. She was discharged with a control RV-echo showing a slight reduction in the size of the hematoma (117 x 74 x 83 mm) and decreasing inflammatory parameters.

A re-evaluation of the RV-echo 1 month after discharge showed a marked increase in size (140 x 83 mm) with poor pain control and mild anemia, so she was admitted for a total right nephrectomy. During surgery, a renal mass was identified, pushed anteriorly and without clear cleavage planes with the inferior vena cava. The renal hilum was identified and followed the ligation of the vascular structures of the renal hilum and right ureter before the removal of the right kidney with part of the right adrenal gland, which was sent for anatomo-pathological examination.

The obstetrician confirmed fetal viability and there were no post-operative complications. Anatomical pathology results showed dysmorphic blood vessels with thickened wall and perivascular epithelioid differentiation of myoid cells (Figure 3). These histological markers may be the cause of spontaneous bleeding. Pathology result also showed tumor formation compatible with subcapsular renal hematoma without renal or adrenal involvement and without neoplastic lesion.

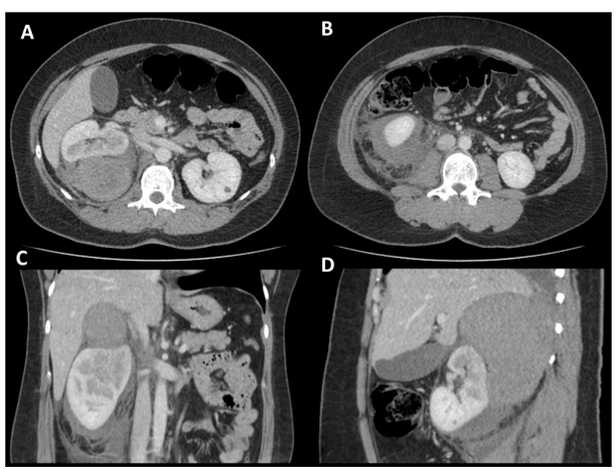

Figure 2. Abdominal CT scan: a spontaneously hyperdense lesion in the right perirenal area measuring around 127 x 91 x 75 mm (longitudinal x anteroposterior x transverse) with no definition of a bleeding vessel or clear identification of the lesion's origin, independent of the adrenal gland, which is compressed and maintains normal dimensions.

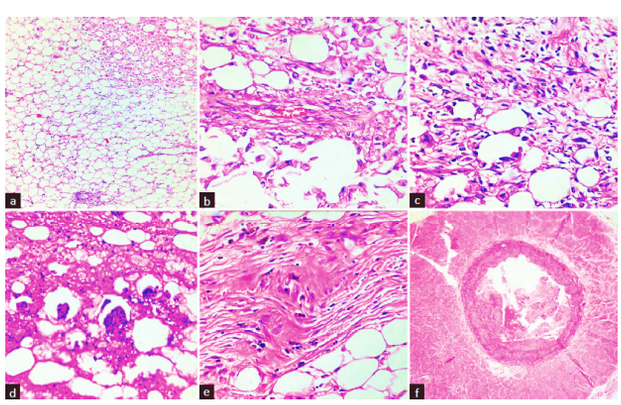

Figure 3. Anatomical pathology result showed dysmorphic blood vessels with thickened wall and perivascular epithelioid differentiation of myoid cells.

DISCUSSION

WS is a rare and potentially fatal disease that depends on rapid diagnosis and correct treatment for a good outcome. In this case, the delay in diagnosis was due to prioritizing other differential diagnoses such as renal colic, musculoskeletal pain, or extrinsic compression of abdominal structures by a gravid uterus. This justify the discharge at first admission medicated with paracetamol and without further investigation.

In addition to clinical diagnosis, CT is the best diagnostic test as it can visualize the vessel with active bleeding[6]. In cases of self-limiting bleeding, a conservative approach can be adopted, with imaging and

analytical monitoring. In the event of hemodynamic instability or the development of a hematoma, an invasive approach becomes necessary, either with embolization of the bleeding vessel by interventional radiology or surgery.[5]

ETHICAL CONSIDERATIONS

Signed consent was obtained from the patient for the use of clinical information and frames from her imaging exams. The patient was informed and authorized the possible publication of the material.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

FOUNDING SOURCES

No funding has been received for this article.

BIBLIOGRAPHY

1. McDougal WS, Kursh ED, Persky L. Spontaneous rupture of the kidney with perirenal hematoma. J Urol. 1975;114:181.
2. Albi G, del Campo L, Tagarro D. Wunderlich's syndrome: causes, diagnosis and radiological management. Clin Radiol. 2002;57:840.
3. Zhang JQ, Fielding JR, Zou KH. Etiology of spontaneous perirenal hemorrhage: a meta-analysis. J Urol. 2002;167:1593.
4. Cinman AC, Farrer J, Kaufman JJ. Spontaneous perinephric hemorrhage in a 65-year-old man. J Urol. 1985;133:829.
5. Sotošek S, Markić D, Španjol J, Krpina K, Knežević S, Maričić A. Bilateral Wünderlich Syndrome Caused by Spontaneous Rupture of Renal Angiomyolipomas. Case Rep Urol 2015;2015:316956
6. Kane. D, Abdelrahman. M, Looney T. Aisling, Eogan. M. Wunderlich's syndrome in pregnancy: a shocking triad. BMJ Case Rep 2019;12:e229219