We believe that single-port DP is a promising technique that will be able to be performed with guaranteed safety and efficacy in coming years, provided that patients are properly selected and referred to hospitals with high-level performance in advanced laparoscopic surgery with single-port experience.

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Salvador Morales-Conde*, Mercedes Rubio-Manzanares, Isaías Alarcón, Antonio Barranco, María Socas

Unidad de Innovación en Cirugía Mínimamente Invasiva, Servicio de Cirugía General y del Aparato Digestivo, Hospital Universitario Virgen del Rocío, Sevilla, Spain

*Corresponding author.
E-mail address: smoralesc@gmail.com
(S. Morales-Conde).

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Spontaneous Retroperitoneal Hematoma and Pregnancy. Case Report

Hematoma retroperitoneal espontáneo y embarazo. Caso clínico

A 30-year-old patient with a prior medical history that included 3 pregnancies and 2 cesareans came to our emergency department at 30 weeks gestation complaining of sudden-onset sharp, stabbing pain in the lower left quadrant that had started 12 h earlier. Family members denied any type of abdominal trauma in previous days. The patient reported diaphoresis since the onset of pain, with no nausea, vomiting, fever, dyspnea or chest pain. When questioned, the patient denied any history of hypertension, hematuria or any significant medical disorder. Until the day of hospitalization, the pregnancy had not presented any complications. The 2 cesareans had been performed 7 and 5 years before hospitalization.

No fetal heart activity was detected, and the patient was in poor condition. She was tachycardic and hypotensive; the abdomen was distended but there was no evidence of hypertonia of the uterus. The initial diagnosis was uterine rupture, and cesarean section was performed with a midline abdominal incision. We found a large quantity of free blood in the abdominal cavity and a stillbirth. When the membranes were broken, the amniotic fluid was clear. Upon examination of the uterus, no macroscopic abnormalities were observed. However, there was an extensive retroperitoneal hematoma (RH) extending across the midline and to the pelvis. We decided to open the retroperitoneal space and observed that the left renal artery had a small 3-mm injury in the area of the renal hilum of unknown origin that was bleeding profusely. Coagulopathy was not detected. Due to the unstable condition of the patient, a nephrectomy was performed. The patient received a total of 26 units of blood and blood products during surgery and the immediate postoperative period. She was later transferred to the Intensive Care Unit, where she died two days after surgery.

The histopathological examination of the kidney and its vessels showed a weight of 165 g with long vessels with no evidence of atherosclerosis or neoplasms. The renal artery

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showed an opening of about 5 mm in diameter. Microscopic examination of the renal artery revealed a dense inflammatory exudate through the wall in several places, which could be points of gradual weakening that led to the rupture and extensive RH. Slices of the renal artery far from the site of rupture showed intimal thickening.

RH is a rare disease, defined as hematoma in the retroperitoneal space that occurs with no recent history of trauma, anticoagulant therapy or vascular disease.[1,2] The patient in this case had no recent trauma, anticoagulant therapy or vascular disease, and, as in most cases, presented significant abdominal pain accompanied by anemia.[1] The origin of this disorder is not clear.[2,3] Several associated factors have been found, such as hypertension, atherosclerosis, arterial malformations and coagulation abnormalities.[1,4] In the case of our pregnant patient, no evidence was found of any of these factors.

The diagnosis of RH can be extremely difficult because of the lack of pathognomonic signs or symptoms. Presenting symptoms may include microscopic hematuria (30%), hypertension and flank or abdominal pain.[1] In most cases, the pain is nonspecific and difficult to locate. The lack of symptoms, presence of pain in the absence of peritoneal signs, leukocytes and other acute abdominal findings during surgery may lead to misdiagnosis and, in some cases, catastrophic results. The diagnosis of an abdominal vascular emergency is often not made until the patient becomes hemodynamically unstable, which makes the diagnosis of hypovolemic shock more apparent. In the context of pregnancy, the main differential diagnosis considered is *abruptio placentae*.[2,5]

Within the differential diagnoses of RH, tumors and retroperitoneal cystic masses should be considered. Retroperitoneal tumors are rare, representing between 0.3% and 0.8% of all neoplasms.[6,7] Among these tumors, liposarcoma is the most common retroperitoneal malignant tumor. Other tumors to consider are fibrous histiocytomas, schwannomas, and paragangliomas.[8,9] Retroperitoneal cystic lesions may be neoplastic or non-neoplastic. There are a wide variety of neoplastic lesions, including cystic lymphangioma, mucinous cystadenoma and cystic teratoma, among others. Non-neoplastic lesions include pancreatic pseudocyst, lymphocele, and urinoma.

When a renal vessel injury is diagnosed, there are 3 therapeutic options: ligation, nephrectomy, and vessel repair. However, renal vascular lesions are associated with a high rate of kidney loss and high mortality.[6] RH management depends on the clinical presentation. Emergency surgery is indicated if there are signs of significant blood loss or a secondary complication such as a bowel obstruction or ischemia. The procedure involves dissection and evacuation of the hematoma and search for the bleeding point.[2] In this case, hemostatic embolization of the vessel was ruled out because it was considered that the symptoms may have been secondary to premature *abruptio placentae*.

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María Labarca-Acosta, Duly Torres-Cepeda, Eduardo Reyna-Villasmil*

Servicio de Obstetricia, Hospital Central Dr. Urquinaona, Maracaibo, Estado Zulia, Venezuela

*Corresponding author.
E-mail address: sippenbauch@gmail.com (E. Reyna-Villasmil).

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