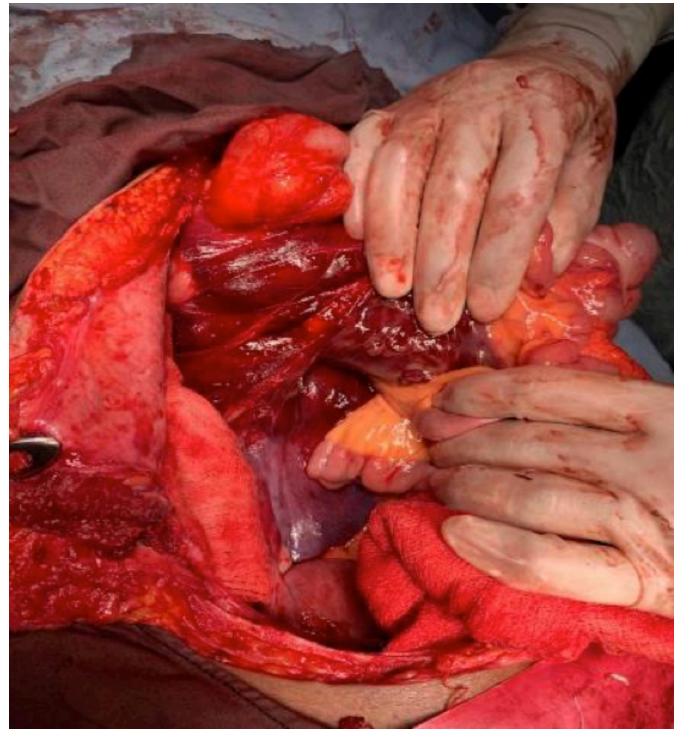


## Retroperitoneal Ectopic Pregnancy Presenting as a Massive Retroperitoneal Hematoma

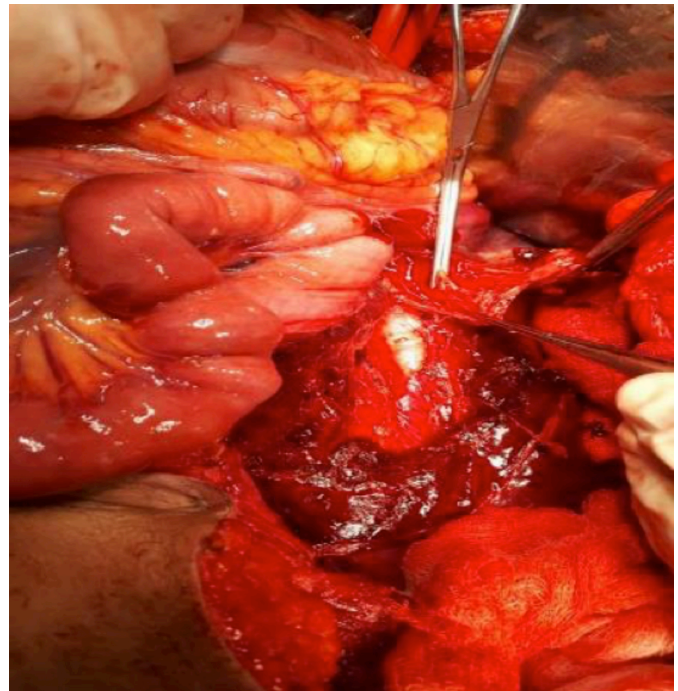
Sir,

A 23-year woman, G4P2+1, presented to Emergency Department (ED) with history of amenorrhea for six weeks and recent vaginal bleeding. Her past obstetric history revealed that she had two normal vaginal deliveries and one ectopic pregnancy followed by right salpingectomy. She was vitally stable with a normal uterus and no evidence of intrauterine gestational sac on trans-vaginal ultrasound. Her hemoglobin was 12.7 g/dl, platelets  $273 \times 10^9/L$ ,  $\beta$ -hCG was 6520 IU/L initially and increased to 12016 IU/L after 48 hours with still no evidence of intrauterine pregnancy. However, on the next day, the patient developed pain in the epigastrium, pallor and vomiting with blood pressure dropping to 90/50 mmHg and a pulse of 99 beats/min. The ultrasound then revealed fluid in Morrison's pouch, pouch of Douglas and a heterogeneous lesion in the right adnexa, giving the impression of a ruptured ectopic pregnancy; for which, an urgent laparotomy was planned. Peroperatively, the uterus and the left tube were normal, and the right tube was absent. There was no collection of any blood or fluid in the pelvis. Exploration of the upper abdomen revealed a large 20×15 cm retroperitoneal hematoma, behind the left colonic mesentery, extending from the epigastrium to the left iliac fossa (Figure 1). For the management of the retroperitoneal ectopic pregnancy (REP), a vascular surgeon was involved in exploring the retroperitoneal space and clearing the hematoma. A bleeding ectopic pregnancy attached through small feeding vessels, on the left side of the aorta above the inferior mesenteric artery, was located. The aorta was slinged above the coeliac plexus, and pregnancy tissue was excised with the ligation of feeding vessels (Figure 2). The hemostasis was secured and drains were kept in the pelvis and paracolic gutter. The patient was transfused four units of blood during the surgery. The  $\beta$ -hCG levels repeated on the first postoperative day showed a level of 1315 IU/L. Injection methotrexate 50 mg was given on 2<sup>nd</sup> postoperative day.  $\beta$ -hCG repeated on 7<sup>th</sup> postoperative day, which showed a value of 370 IU/L. The stitches were removed and she was discharged on 10<sup>th</sup> postoperative day. The histopathological evaluation of the excised tissue revealed hemorrhagic and decidual tissue next to chorionic villi, confirming the diagnosis of a REP.

REP is an extremely rare condition. So far, less than 25 cases have been reported globally. Such pregnancies have a tendency to implant along the major vessels in the abdomen and pelvis,<sup>1</sup> Hall *et al.* reported a case of REP in 1973.<sup>2</sup> Sotus reported a similar case in 1977.<sup>3</sup>



**Figure 1:** Exploration of the upper abdomen revealed a large retroperitoneal hematoma 20 × 15 cm behind the left colonic mesentery.



**Figure 2:** Opened retroperitoneal space on left side of aorta, showing a sling stabilising the aorta above the coeliac plexus, and vessels after excising the ectopic pregnancy.

Both these pregnancies were located between the left side of the aorta and superolateral side of the left iliac artery. Okorie reported a case of REP located similarly over the aorta and inferior vena cava near the second and third part of the duodenum.<sup>4</sup> It was postulated that such REPs result from either dissemina-

tion of cells or tissue fragments through vascular or lymphatic channels or due to trophoblastic invasion and penetration of the peritoneum.<sup>5</sup> Clinical manifestations can vary from mild symptoms to hypovolemic shock and death, making timely diagnosis and multidisciplinary approach with the removal of the placental tissue, followed by methotrexate essential for saving lives.<sup>4</sup> The diagnosis of such a pregnancy presents a major challenge.<sup>6</sup> The rising  $\beta$ -hCG with no detectable pregnancy on transvaginal ultrasound should raise suspicion and alternate imaging techniques, such as MRI can be helpful.

#### CONFLICT OF INTEREST:

The authors declared no conflict of interest.

#### AUTHORS' CONTRIBUTION:

ZM: Substantial contribution, conception and design of work, final approval of work.

KDA: Drafting the work.

FA: Revising the work critically.

FH: Agreement to be accountable for all aspects of the work.

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