

# Misdiagnosis of Liver Infarction after Cesarean Section in a Patient with Antiphospholipid Syndrome During Pregnancy

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To the editor: The liver has a dual blood supply via the hepatic artery and portal vein, and there also exist multiple levels of collateralization and hence blockage of these vessels alone usually does not cause liver infarction. Hence, infarction of the liver is relatively rare clinically. Here is a case of misdiagnosis of liver infarction.

A 32-year-old Chinese female patient diagnosed with antiphospholipid syndrome who had never been treated prior to hospitalization was performed a cesarean section at 37 weeks, anticoagulation therapy was given on the day of surgery, 5000 U heparin intramuscular injection once a day. On the third evening postoperative, the patient presented with a sudden onset of durative right upper abdominal pain with nausea. A three-phase contrast-enhanced abdominal computed tomography (CT) scan revealed multiple, irregular intra hepatic low-density shadows [Figure 1]. Aspartate aminotransferase-151 U/L, alanine aminotransferase-173 U/L. The initial treatment given was an antiinflammatory combined with a cephalosporin and an antispasmodic because the diagnoses of mesenteric venous thrombosis, cholelithiasis, cholecystitis and some other diseases were excluded. There were no improvements in symptoms and on the 5<sup>th</sup> day postoperative, patient developed transient unconsciousness and convulsions that lasted about 20 seconds. A head magnetic resonance imaging revealed the possibility of an acute cerebral infarction. The patient was then presented with a sudden onset of unconsciousness with decerebrate rigidity. A head CT showed a possible right cerebral hemorrhage invading into the ventricular system. Finally, the patient fell into a deep coma. The patient died on the 13<sup>th</sup> day after the operation due to cerebral infarction.

We looked at the CT once again and still thought that the low-density shadows were related to thrombosis. Radiology experts repeatedly read the CT examination results [Figure 1] and the relevant literature, and corrected the CT diagnosis that was a small liver infarct.

It has been reported that pregnancy-associated liver infarctions are related to combined antiphospholipid syndrome and severe preeclampsia complicated by HELLP syndrome.<sup>[1-3]</sup> The main

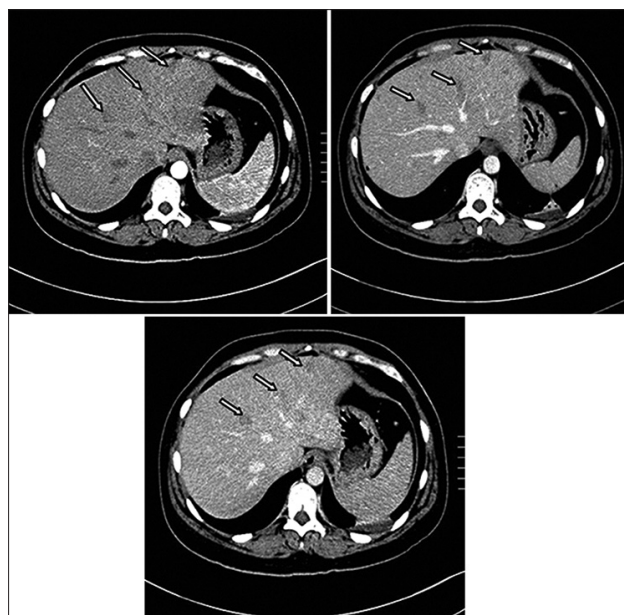


Figure 1: Low-density shadows of the abdominal computed tomography.

pathological feature of antiphospholipid syndrome is presenting with a multiple thrombosis *in vivo*. Thrombosis is prone to repeatedly occurring if the disease is poorly controlled and can be formed in various parts of the body. One study had shown that treatment with low molecular weight heparin and aspirin can improve the prognosis of pregnant women with antiphospholipid syndrome.<sup>[4]</sup> The reason for the misdiagnosis of liver infarction is mostly likely due to the rarity of it and thus a lack of understanding of the disease and how it presents. The nonspecific symptoms such as multiple small lesions, minimally elevated transaminase levels, abdominal pain, and an atypical CT also contribute to the misdiagnosis, as none of these are pathognomonic for a liver infarction. For above patient, the diagnosis of antiphospholipid syndrome and the use of anticoagulation therapy did not occur early enough. The goal of this case study is to highlight our findings so that other physicians can put liver infarction in their differentials when presented with similar symptoms. If diagnosed earlier, this problem can be treated more appropriately and hopefully will result in better prognoses for future patients.

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