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Splenic artery aneurysms, portal hypertension and pregnancy

To the Editor:

I thank Andrade and the VALDIG investigators for their study of pregnancy outcomes in women with idiopathic non-cirrhotic portal hypertension, noting liver-related events in one-third of patients.[1] I would be interested to know whether imaging was performed with regard to splenic artery aneurysms (SAAs).

SAAs have been reported at autopsy in 7.1% of individuals with cirrhotic portal hypertension.[2] The incidence of SAA in non-cirrhotic portal hypertension is not known. Women are affected approximately 4 times as often as men, and there is an association with cumulative parity.[3]

The risk of rupture of an existing SAA during pregnancy is estimated to be 25%.[4] SAA rupture during pregnancy is associated with maternal and foetal mortality rates of 70% and 90%, respectively.[5] Of the reported cases of SAA rupture, 30% occurred during pregnancy.[6]

Imaging modalities for detection of SAA include colour flow doppler ultrasound, computerised axial tomography angiography (CTA), digital subtraction angiography and magnetic resonance angiography. Ultrasound avoids radiation to the foetus but may be dependent on the operator and body habitus of the patient. CTA is associated with a foetal radiation dose of approximately 30 milligray, below the level associated with foetal harm.[7] Gadolinium is usually avoided in pregnancy as studies have demonstrated adverse foetal and neonatal effects.[8]

While current recommendations advise intervention with SAA greater than 20 mm in diameter, more than half of SAAs which rupture during pregnancy are smaller in size. Some authors therefore recommend treatment of all SAAs in women of childbearing age, and that pregnancy is an absolute indication for proactive management.[9] Minimally invasive techniques include transcatheter or percutaneous angiographic embolization, and laparoscopic ligation.[10] Surgery should ideally be performed in second trimester, though laparoscopic aneurysm resection and splenectomy have been successfully performed in third trimester.

Given the extremely high mortality rates for both mother and foetus with rupture, regular surveillance for SAA should be performed in all women of childbearing age with portal hypertension, as well as during pregnancy.

Keywords: Splenic artery aneurysm; Portal hypertension; Pregnancy.

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Reply to: "Splenic artery aneurysms, portal hypertension and pregnancy"

To the Editor:
We thank Dr Adam Morton for his interest and comments on our study.[1,2] In his letter, Dr Morton elaborates on the importance of diagnosing and managing splenic artery aneurysm in women of childbearing age with idiopathic non-cirrhotic portal hypertension. The author rightly points to the risk of rupture of splenic artery aneurysm during pregnancy in these patients, with the associated risk of maternal and foetal mortality.

Following this comment, we reviewed the charts of all women included in our study. An abdominal imaging procedure was performed in all women 4 (0–27) (median, range) months after delivery. Only 1 woman had a splenic artery aneurysm of 16 mm in the largest axis (patient 7). This patient had 3 pregnancies. Splenic artery aneurysm was diagnosed after the first pregnancy and remained stable over the 51 months of follow-up, which included 2 pregnancies.

While the prevalence of splenic artery aneurysm in patients with cirrhosis and portal hypertension ranges from 7% to 20%, this prevalence in patients with idiopathic non-cirrhotic portal hypertension is unknown with only few cases reported so far.[3–10]

In conclusion, we agree with Dr Morton that splenic artery aneurysm screening should be added to the list of items to be checked prior to pregnancy in women with idiopathic non-cirrhotic portal hypertension. The size of aneurysm justifying prophylactic treatment however remains to be determined.

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