

# Case report

## A rare cause of upper gastrointestinal bleeding in pregnancy

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A 29-year-old 11-week pregnant multigravida woman without previous medical history presented with sudden onset of hematemesis. This case illustrates the occurrence of a rare complication (rupture of pseudoaneurysm of right hepatic artery inside the biliary system), appearing as upper gastrointestinal bleeding in a pregnant woman. The cause of the rupture is presumably pregnancy-related. We would like to emphasize the presence of pseudoaneurysm of the hepatic artery as a rare cause of gastrointestinal bleeding in pregnancy.

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### Introduction

Pseudoaneurysm of hepatic artery is a rare complication which has previously been reported in one postmortem case associated with pregnancy (1). We report the first case of pseudoaneurysm of hepatic artery in pregnancy which has undergone successful treatment.

### Case presentation

A 29-year-old 11-week pregnant multigravida woman without previous medical history presented with sudden onset of hematemesis. Heart rate was 124 beats/min and blood pressure was 105/72 mmHg. Physical examination was unremarkable except for mild jaundice and palpable epigastric mass.

### Investigation and differential diagnosis

Laboratory testing showed hemoglobin of 7.3 g/dL, total bilirubin of 6.7 mg/dL, direct bilirubin of 6.2 mg/dL, and alkaline phosphatase of 234 mg/dL. Esophagogastroduodenoscopy (EGD) showed hemobilia. Abdominal ultrasound also revealed a 6x5x5 cm heteroechoic mass in the upper abdomen with bile duct dilation. Differential diagnosis was duodenal mass (intramural hematoma, bleeding tumor) and mass of caudate of liver.

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Due to recurrence of massive hematemesis, the patient underwent a low-dose computed tomography with angiography (CTA) of the abdomen due to the pregnancy. The abdominal CTA revealed a 3.5x3.2x1.6 cm lobulated saccular pseudoaneurysm arising from the proximal right hepatic artery and compressing the common bile duct (Figure 1 and 2).

### Treatment and outcome

A coil embolization was, therefore, performed. The procedure was successful (Figure 3), and the patient had no recurrence of hematemesis. Bilirubin also normalized. Other causes of mycotic aneurysm were ruled out. She continued the pregnancy until term and ultimately had an uneventful labor. The infant was healthy. After one-year follow-up, the patient exhibited no evidence of vasculitis.

**Figure 1 and 2** CTA showed a lobulated contour of saccular aneurysmal dilatation at proximal right hepatic artery, measured about 3.5x3.2x1.6 cm in size and 2.6 mm in neck width; pseudoaneurysm is likely. There is perianeurysmal heterogeneously hyperdense non-enhancing lesion which shows flip-flop phenomenon, measured about 5.5x6.1x5.5 cm in size; Partially thrombosed pseudoaneurysm at proximal right hepatic artery is likely. This lesion causes stretching of the common hepatic artery and portal vein. Hyperdense lesion with flip-flop phenomenon is also seen within dilated bilateral IHD, CHD, CBD and gallbladder; Contrast extravasation into CHD, CBD, 1st, 2nd, 3rd, 4th part of duodenum and jejunum is detected in portovenous phase. hemobilia is suggested.



**Figure 3** The coiled embolization was successful.



### Discussion

In pregnancy-related arterial aneurysm, the most commonly reported arteries are aorta, cerebral arteries, splenic artery, renal artery, coronary arteries, and ovarian artery (2). Hepatic artery aneurysm in pregnancy which has previously been reported in one postmortem case associated with pregnancy (1). We reported the first case of pseudoaneurysm of hepatic artery in pregnancy which has underwent successful treatment. The related cause is thought to be pregnancy.

### References

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