Case Report

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Post partum rupture of hepatocellular adenoma- a rare case report

Abstract

Hepatocellular adenoma is a hormone dependent tumor of the liver. It can increase in size under the effect of hormones. It tends to increase in size under the effect of oral contraceptives (OCPs) and pregnancy. Most of the Hepatocellular Adenomas are asymptomatic and usually do not require any treatment. Hepatocellular adenoma with size <5 cm carries minimal risks and complications in terms of malignant transformation and rupture. Big adenoma in advanced gestational age has a high propensity to rupture. It is a catastrophic event which requires prompt management and treatment to save life of the patient and the fetus. There are very few cases reported of rupture of hepatocellular adenoma in ante-natal phase and none in post-partum. Here in our case report, we present a case of rupture of hepatocellular adenoma in the postpartum period, which was recognized, and timely intervention was done, and we could save the life of the patient with a good prognosis.

Keywords: hepatocellular adenoma, benign tumour, malignant transformation, oral contraceptives, spontaneous rupture, post-partum

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Abbreviations: OCPs, oral contraceptives; HCA, hepatocellular adenoma; TAE, trans arterial embolization; RFA, radio frequency ablation

Introduction

Hepatocellular adenoma (HCA) is rare benign tumour of the liver that usually affects women during their reproductive years. Incidence of Hepatocellular adenoma is increased in women with history of long-term usage of oral contraceptives.[1] At present, incidence of Hepatocellular adenoma is approximately 1–3 per 100,000 per year.[2] Complications associated with Hepatocellular adenoma include malignant transformation in approximately 4% cases[2] and very rarely rupture. Rupture of Hepatocellular adenoma may present with right upper quadrant abdominal pain with elevated liver enzymes and may be life threatening.[1] In pregnancy there is high risk of hormone induced growth and spontaneous rupture due to increased level of steroid hormones.[1] Due to the scarcity of cases, there is no evidence-based algorithm for the management of complicated Hepatocellular adenoma during pregnancy. Here we present a rare case report case of a women who had spontaneous rupture of hepatic adenoma in the post-natal period.

Case report

A 27 years old third gravida with previous 1 living issue with history of previous caesarean section and 1 vaginal delivery presented to gynae emergency at 38 weeks' gestation in active labour. She had no other high risk factors. Patient had no history intake of oral contraceptives. On admission, her vitals were stable and the labour progressed spontaneously. The patient delivered uneventfully 3.5 hrs after admission. After 2 hrs Post-delivery, she complained of right sided chest pain and neck pain and had a syncopal attack while going to the washroom. Her vitals at that time were: pulse rate-96/minute, low volume and blood pressure 118/76 mm Hg. On examination, patient was pale but there was no external evidence of bleeding from any site. The uterus was well contracted without any evidence of haemorrhage. On upper abdominal examination, there was tender hepatomegaly without any evidence of free fluid in the abdomen. An urgent ultrasound was done which was suggestive of subcapsular liver hematoma. Further, a contrast enhanced CT was done which was suggestive of expanding haematoma, secondary to a large hepatic adenoma in segment 4A/4B Figure 1, 2. Patient had a fall in haemoglobin from 11gm% to 6.5gm% for which she was given 2 units of packed red blood cells and subsequently underwent angioembolization of hepatic artery. Post procedure, patient had reactionary pleural effusion for which chest tube insertion was done which was consequently removed after 10 days of insertion. Patient is in the recovery phase and is doing fine. Her recent haemoglobin is 12.2 gm % and is on oral haematenics with no fresh complains at.

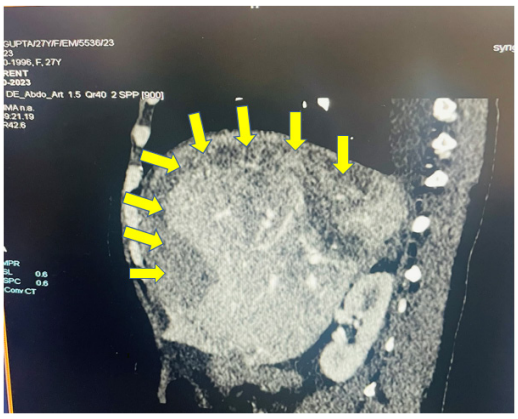

Figure 1 Saggital section on CT showing ruptured hepatic adenoma.

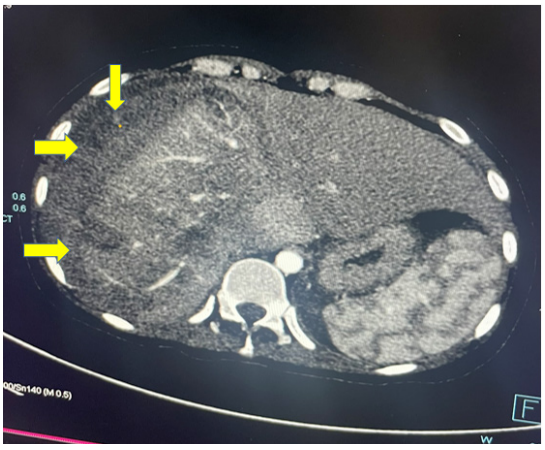

Figure 2 Coronal section showing ruptured hepatic adenoma.

Discussion

The risk of rupture of Hepatocellular adenoma has been proven to be increased during pregnancy and post-partum period.[3] Ruptured hepatic adenoma during pregnancy entails a high maternal and fetal mortality.[3] It is difficult to predict which patients will have rupture of the adenoma but previous studies have suggested that increased tumour size (> 7 cm) as well as advanced gestation (third trimester and beyond) are associated with a higher risk of rupture.[4] In a study conducted by Marcia et al on 48 cases of Hepatocellular adenoma with pregnancy, it was concluded that Hepatocellular adenoma <5 cm confers minimal risk to a pregnant woman but close monitoring of the size of Hepatocellular adenoma with ultrasound is recommended during pregnancy so that intervention if required may be done timely.[5] In a study of 12 Antenatal women with hepatocellular adenoma conducted by Mirelle E et al.it was concluded that all pregnancies had an uneventful course with a successful maternal and foetal outcome and hence patients with Hepatocellular adenoma were not discouraged from pregnancy.[6]

Rupture of the Hepatocellular adenoma can cause intrahepatic or intraperitoneal haemorrhage, with or without indications of hypovolemic shock.[7] Appropriate imaging studies should be conducted which includes an emergency ultrasound followed by a contrast-enhanced CT to confirm the exact anatomy and diagnosis if the patient is hemodynamically stable. To achieve adequate haemostasis, an emergency laparotomy with gauze packing or partial liver resection has been considered the gold standard for the management or ruptured Hepatocellular adenoma. However, this is a major surgical treatment with high morbidity and mortality. Laparoscopic resection is also conceivable in theory, although it is technically demanding and may be risky in an unstable patient. Less invasive methods, such as trans arterial embolization (TAE), have recently been developed and may provide effective haemostasis without the necessity for an emergency laparotomy.[8] The role of other treatment modalities such as Radio Frequency Ablation (RFA) during pregnancy is not well documented. Wilson et al. suggested that angioembolisation and formal resection in case of haemorrhage of Hepatocellular adenoma during pregnancy is safe for both the mother and the foetus with good clinical outcomes.[9] The present case study demonstrates effective multidisciplinary care including timely TAE that resulted in a favourable outcome in a postpartum patient with ruptured hepatic adenoma.

Conclusion

Giant hepatic adenomas present an unacceptable risk of spontaneous rupture, making care of the condition during pregnancy extremely difficult. Very little written information exists regarding the likelihood of difficulties and the best course of action in these circumstances. Pregnancy-related issues may arise from hepatic treatment choices, whether surgical or interventional, and the baby may experience both short- and long-term complications if delivery is planned before week 34. The authors conclude that pregnancy in women with Hepatocellular adenoma, regardless of size, warrant a close surveillance strategy. Also, the obstetricians must be aware about this rare entity so that timely diagnosis and intervention may be done.

Acknowledgments

None.

Conflicts of interest

The author declares that there is no conflicts of interest.

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