TMR
doi: 10.53388/ghr2021-09-034

CASE REPORT

Spontaneous rupture of hepatocellular adenoma

Swetha rapolu[1*]

[1]Kasturba Medical College Hospital, Mangalore, Karnataka, India.

***Corresponding to**: Swetha rapolu, Kasturba Medical College Hospital, Mangalore, Karnataka, India; E-mail: swethu.rapolu@gmail.com.

Abstract: We herein report an unusual case of rupture of hepatic cyst adenoma. Clinical and radiographic, histopathological features of this case are discussed below. Surgical management was undertaken due to the hemodynamic instability of this patient.
Key words: hepatocelluar adenoma , rupture.

***Acknowledgments*:** No funding.

***Abbreviations*:** HCA, Hepatocellular adenomas; TAE, trans arterial embolization.

***Authors' Contributions*:** Swetha rapolu proposed the idea of the paper and wrote the manuscript.

***Competing interests*:** The author declare there is no conflicts of interest.

***Citation*:** Swetha R. Spontaneous rupture of hepatocellular adenoma. *Gastroenterol Hepatol Res*. 2021;3(3):12. doi: 10.53388/ghr2021-09-034.

***Executive Editor*:** Cheng Xin.

***Submitted*:** 07 July 2021, ***Accepted*:** 01 September 2021, ***Published*:** 12 September 2021

TMR
doi: 10.53388/ghr2021-09-034

Introduction

Hepatocellular adenomas (HCA) are usually benign incidental liver tumors. Intralesional bleeding and malignant transformation are threatened complications of hepatocellular adenomas. Spontaneous rupture of hepatic adenoma is relatively a rare condition. We report a case of spontaneous rupture of hepatic adenoma in a young lady with multiple adenomas.

Case detail

A 42 years old lady presented with complaints of progressive, severe pain in the right hypochondriac region for three days and low grade fever for two days. She was a patient of systemic hypertension on Tab. Amlodipine 2.5 mg/day. Her menstrual history was normal and there was no history of prior oral contraceptive pill intake. On examination she was pale, had tachycardia (pulse rate 108/min) and her blood pressure was 110/70 mm Hg. Physical examination of the abdomen revealed tenderness and guarding over right hypochondrium. Biochemical investigations showed anemia (Hb 9.8 gm/dL). LFT was normal except for raised ALT (110 IU/ml). Platelets and PT/INR were within normal limits. Ultrasound abdomen showed hepatomegaly (18cm) with multiple well defined round to oval hypoechoic lesions in both lobes of liver (largest measuring 7.3´ 3.9 cm) possibly hemangiomas/adenomas with hemorrhage. Further evaluation with CECT abdomen (Figure 1) showed biconcave subcapsular collection measuring 9.2´3.6 cm with mildly enhancing septa with in segment V and VI of right lobe of liver s/o ruptured hepatic adenoma with an adjacent heterogeneously enhancing lesion measuring 6.2´ 4.2 cm non enhancing patchy central necrotic areas and multiple enhancing lesions of varying size in both liver lobes, s/o multiple hepatocellular adenomas. After stabilization she underwent laparotomy with hepatic segmentectomy of segments V, VI and VII. Intra operative findings showed ruptured mass lesion with subcapsular hematoma formation in segment six and seven of right lobe and another similar lesion of 3´2 cm in segment five of liver. Intra-operative and post-operative course in hospital was uneventful. Histopathological examination of resected liver segments confirmed diagnosis of hepatic adenoma (Figure 2) with hemorrhage and features of nonalcoholic fatty liver disease (Activity score -5, fibrosis stage-0). Follow up at seven days showed normal LFT and ultrasound abdomen. Patient was lost to follow up for two years, however she was asymptomatic during this period. MRI imaging at two years showed multiple hepatic adenomas (largest measuring 3×3cm). She was advised conservative therapy and yearly follow-up.

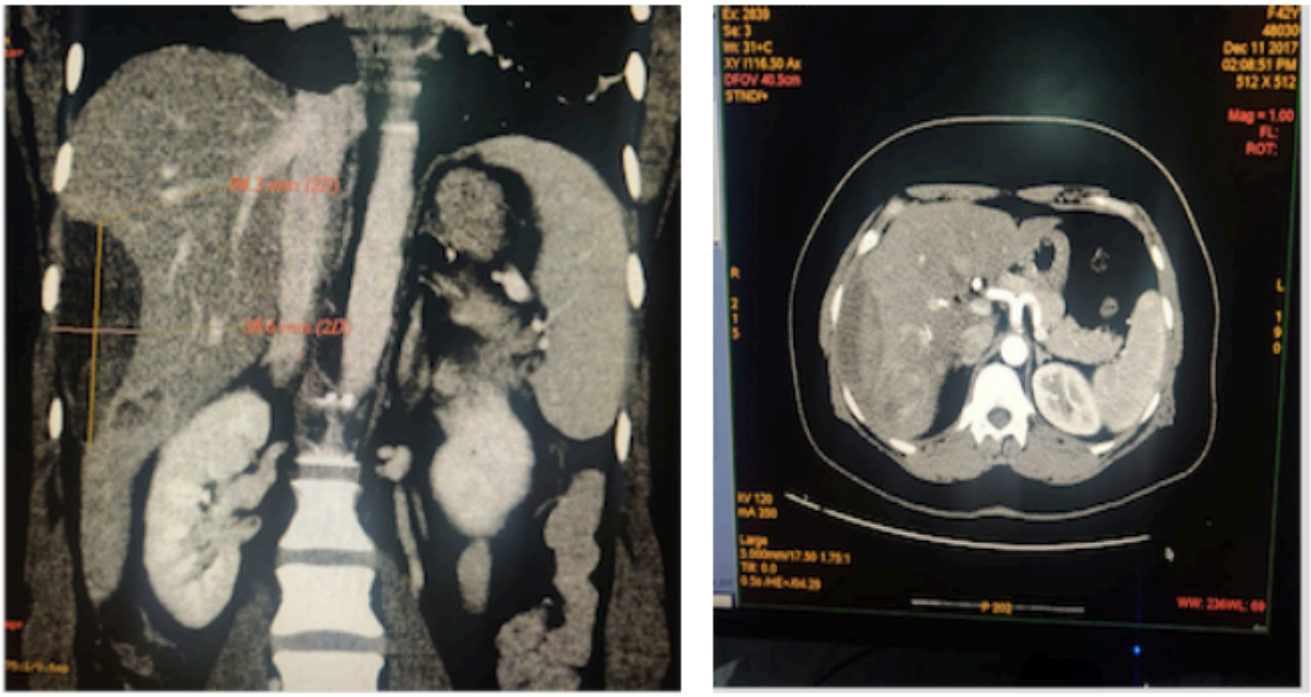

Figure 1. Rupterd hepatic adenoma with extrahepatic subcapsular collection

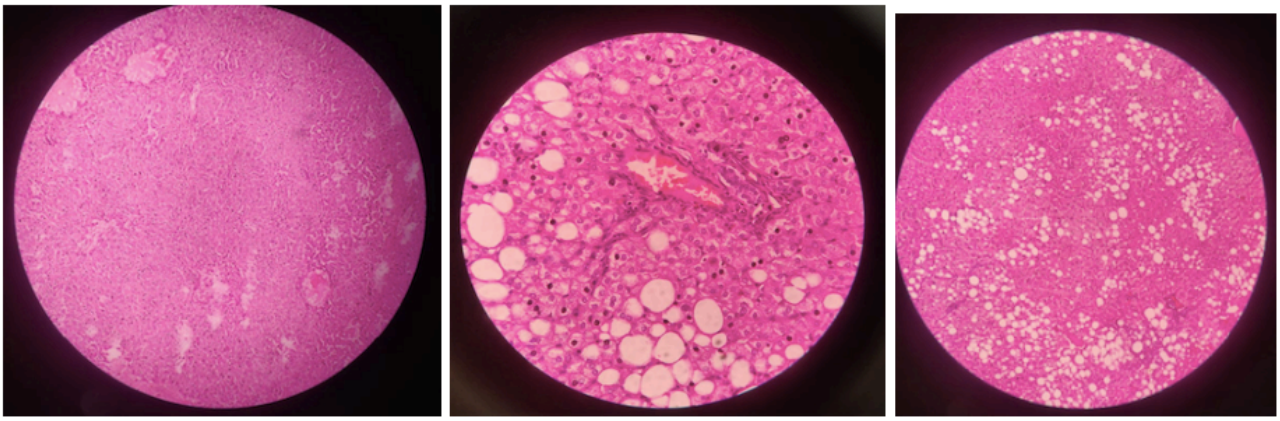

Figure 3. Images of pathological detection. (i).Benign hepatocytes in sheets. (ii).Compressed hepatic sinusoids. (iii).Macro vesicular steatosis

Discussion

Hepatocellular adenomas are rare, solid, benign tumor of the liver. Risk factors for HCA include prolonged oral contraceptive pill, anabolic androgens, certain genetic syndromes like glycogen storage disorders and familial adenomatous polyposis [1]. Obesity and metabolic syndrome are additional risk factors in men. HCA can present as asymptomatic incidental imaging findings to acute life threatening haemorrhage. Approximately 21 to 40% of HCA have risk of haemorrhage and 5% have risk of malignant transformation to hepatocellular carcinoma [2]. Risk factors for bleeding include lesion size >5cm, progressive lesions, recent hormone use, pregnancy, exophytic morphology and inflammatory or telangiectatic subtype [1]. In patients with multiple HCA risk of bleeding depends on size of largest lesion than number of lesions. Bleeding is in HCA can be intra tumoral, intrahepatic, or extrahepatic. Normally bleeding in HCA is intra lesional but very rarely HCA can rupture presenting with severe abdominal pain radiating to right shoulder, hemodynamic instability, hemoperitoneum and haemothorax and exsanguination leading to death. CECT is the preferable imaging modality in suspected case of ruptured HCA [3]. On contrast enhanced multiphase CT , HCA shows characteristic features of peripheral enhancement during early phase with centripetal flow during portal venous phase. On CT scan HCA with recent haemorrhage can be seen as hyper attenuating lesion and presence of necrosis or fibrosis gives heterogenous appearance to HCA. Alternative diagnosis to be considered in case of liver space occupying lesion with spontaneous haemorrhage are hepatocellular carcinoma, focal nodular hyperplasia and hyper vascular metastatic lesions. In hemodynamically stable patients , ruptured HCA with bleeding limited to liver can be managed by conservative therapy alone or conservative therapy with subsequent surgery if required. Whereas patients with hemodynamic instability should be managed by initial resuscitation followed by laparotomy with pressure packing of liver , emergent surgical resection, trans arterial embolization(TAE) [4]. Currently if available TAE is preferred over surgery because of minimally invasive technique and less hospital stay. In patients who underwent TAE follow up assessment with contrast MRI after six months is recommended to assess regression /complete involution of lesion .Any residual HCA lesion in MRI six months after TAE is an indication for surgical resection [5]. Patients with multiple hepatocellular adenomas size smaller than five cm require follow-up with contrast MRI at 6-12month interval [6], with subsequent intervals based on the stability of lesion.

References

1. Agrawal S, Agarwal S, Arnason T, Saini S, Belghiti J. Management of Hepatocellular Adenoma: Recent Advances. Clinical Gastroenterology and Hepatology. 2015;13(7):1221-1230.
2. Thomeer M, Broker M, Verheij J, Doukas M, Terkivatan T, Bijdevaate D et al. Hepatocellular adenoma: when and how to treat? Update of current evidence. Therapeutic Advances in Gastroenterology. 2016;9(6):898-912.
3. Golli M, Van Nhieu JT, Mathieu D, Zafrani ES, Cherqui D, Dhumeaux D, Vasile N, Rahmouni A. Hepatocellular adenoma: color Doppler US and pathologic correlations. Radiology. 1994 Mar;190(3):741-4.
4. Huurman V, Schaapherder A. Management of Ruptured Hepatocellular Adenoma. Digestive Surgery. 2010;27(1):56-60.
5. Columbo M, Forner A, Ijzermans J, et al, for the European Association for the Study of the Liver

doi: 10.53388/ghr2021-09-034

(EASL). EASL Clinical Practice Guidelines on the management of benign liver tumours. J Hepatol. 2016 Aug. 65(2):386-98.
6. Marrero J, Ahn J, Reddy R. ACG Clinical Guideline: The Diagnosis and Management of Focal Liver Lesions. American Journal of Gastroenterology. 2014;109(9):1328-1347.