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# Hepatocellular Adenoma with Malignanthypertension and Secondary Amenorrhea: A Rare Case Report

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***Abstract**: Hepatocellular adenoma (HCA) is a rare benign proliferation of hepatocytes, predominantly affecting young women. It is often associated with long term OCP use. It usually presents with abdominal pain may be due to hemorrhage or local compressive symptoms. The tumor markers are usually normal. We report a case of 22-year old female who presented with large upper abdominal lump with malignant hypertension and secondary amenorrhea. CECT abdomen showed well circumscribed enhancing mass in left lobe of liver. Resection of segment 2& 3 of liver was done. After resection, malignant hypertension was also controlled without medication. Patient also resumed normal regular menstruation. Secondary hypertension in HCA is not reported till date though some reports hypertension as paraneoplastic syndrome in hepatocellular carcinoma.*

***Keywords:** Hepatocellular adenoma, hepatocellular carcinoma, secondary hypertension*

***Abbreviations:** HCA - Hepatocellular adenoma,HCC - Hepatocellular carcinoma,OCP- Oral contraceptive pill*

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## I. Introduction

Hepatocellular adenoma is a rare solid benign neoplasm of liver. It is predominantly found in young women (aged 20-40 years) and is often associated with steroid hormones use such as long term OCP use. Histologically HCA are composed of cords of benignhepatocytes containing increased glycogen and fat. Bile ductules are not observed and normal architecture of liver is absent in these lesions. Hemorrhage & necrosis are commonly seen [1]. Secondary hypertension is never reported till date in hepatocellular adenoma. We report a case of HCA with malignant hypertension and secondary amenorrhea.

## II. Case Report

A 22-year old female presented with an upper abdominal lump for 3 years, which was insidious in onset, gradually progressive and painless. She also complained of amenorrhea for last 8 months, before that she was having normal regular menstrual flow. On examination, there was a single intraabdominal lump in epigastrium extending to both hypochondrium and umbilical region, measuring 20 cm horizontally and 17 cm vertically (Fig.1). Lump extended from xiphisternum to umbilicus vertically and right midclavicular line to left anterior axillary fold horizontally. Lump was round in shape, surface smooth, upper margin not palpable, rest three margins well defined & regular, consistency firm and lump moving with respiration. Dull note was present over lump on percussion. B.P. at the time of admission was 210/ 110 mm ofHg.

CECT abdomen revealed well circumscribed mass in left lobe of liver (Fig.2). FNAC was suggestive of hepatocellular adenoma. 24- hour urinary VMA &Metanephrines were normal, done to rule out any endocrine pathology for secondary hypertension. AFP was normal. MRI brain was suggestive of mild brain volume loss.

After various permutation and combination hypertension was controlled on three antihypertensives (clonidine 100mg thrice daily, amlodipine 10mg twice daily and prazosin 5mg once daily). Patient was on three antihypertensives for 3 weeks before surgery. Liver mass affecting whole segment 2 & 3 was resected. It was 3 kg in weight (Fig.3). Biopsy of resected specimen confirmed HCA (Fig.4). After operation patient became normotensive in 2 days and further didn't needed antihypertensives and was discharged. Patient came for follow up uptill 3 months postoperatively every month& is doing well. She also resumed normal menstrual flow 1 month after operation. We report this because of rarity of secondary hypertension in HCA.

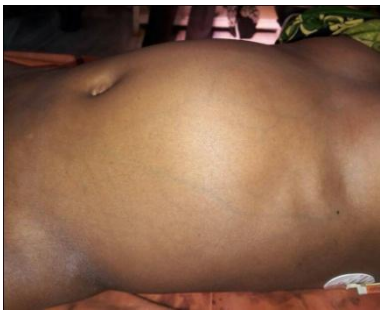

**Fig. 1.** Patient with intraabdominal lump

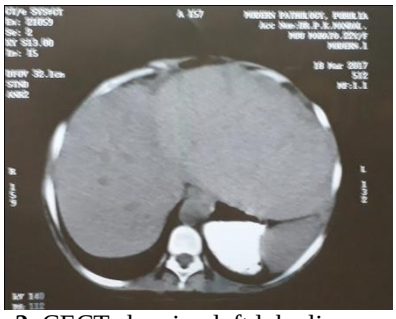

**Fig. 2.** CECT showing left lobe liver mass

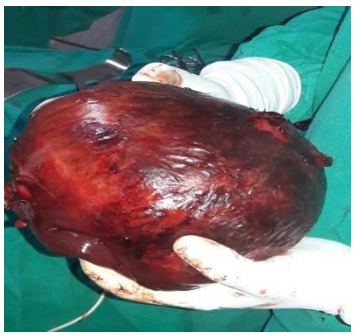

**Fig. 3.** Resected liver mass

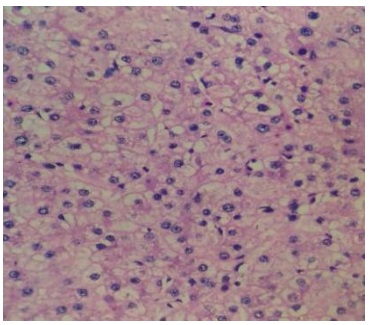

**Fig. 4.** Histopathology showing HCA

## III. Discussion

HCA is a rare solid benign neoplasm of liver. It usually affects young women (aged 20-40 years) & is often associated with OCP use. Male anabolic hormone use also predispose to development of HCA. It is usually singular but multiple lesions have been reported in 12-30% of cases. Histologically HCA are composed of cords of benign hepatocytes with increased glycogen and fat. Bile ductules are not observed and normal architecture of liver is absent in these lesions. Hemorrhage & necrosis are commonly seen [1]. A French collaborative group has recently proposed a molecular- pathologic classification whereby adenomas are classified as β-catenin mutated adenoma, HNF1A mutated adenoma, Inflammatory adenoma and not otherwise specified adenoma [2,3]. Highest risk of malignant transformation is observed in HCA with β-catenin activation [3,4].

The patient usually present with upper abdominal pain due to hemorrhage into the tumor or local compressive symptom. The tumor markers are normal. Imaging tends to be characteristic obviating the need for tissue diagnosis most of the time [5,6,7]. On CECT, it is heterogeneous with peripheral enhancement. MRI usually shows well demarcated heterogeneous mass containing fat or hemorrhage.

Two major risks of HCA are rupture with life threatening intraperitoneal hemorrhage and malignant transformation. Risk of rupture is as high as 30% to 50% in lesion 5cm & larger [7]. Risk of malignant transformation is low. Hepatic adenoma with β-catenin mutation, is considered for early surgical intervention as malignant transformation most commonly occur in this subtype [4,8].

Patient presenting with acute hemorrhage need aggressive management. If possible, hepatic artery embolization along with resuscitationfollowed by laparotomy& resection of mass are required. Symptomatic masses are resected. HCA associated with OCP can be waited for regression after stopping OCP. Liver transplantation may be necessary for aggressive tumors of adenomatosis [9,10].

Hypertension has been reported as rare paraneoplastic phenomenon in HCC. The arterial hypertension that rarely complicates hepatocellular carcinoma may be caused either by a combination of eutopic synthesis of excessive quantities of angiotensinogen and ectopic production and secretion of active renin by malignant hepatocytes, or by eutopic production of angiotensinogen alone [11,12].But such association has never been reported with HCA.

There is association of secondary amenorrhea in acute and chronic liver diseases in various literatures but specific association with hepatocellular adenoma is not mentioned. This needs further study.

## IV. Conclusion

To conclude HCA with malignant hypertension and secondary amenorrhea is not reported till now. HCA is a rare solid benign neoplasm of liver usually affecting young females. Large lesions should probably be resected due to risk of hemorrhage [13].

**Compliance with Ethical Standards**
**Conflict of Interest** The authors declare that they have no competing interests.

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