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Giant Liver Haemangioma Associated With Tuberculosis Of Colon – A Case Report

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Abstract : *Haemangioma is the most common benign tumor affecting the liver and are entirely benign. Hepatic haemangiomas are mesenchymal in origin and usually are solitary. Haemangiomas present a diagnostic challenge because they can be mistaken for hypervascular malignancies of the liver and can coexist with other benign and malignant hepatic lesions, including focal nodular hyperplasia, hepatic adenoma, hepatic cysts, hemangioendothelioma, hepatic angiosarcoma, hepatic metastasis, and primary hepatocellular carcinoma. Hepatic haemangiomas can occur as part of well-defined clinical syndromes. In this condition, patients are typically male and younger than 1 year. The goal of treatment is eradication of the haemangioma, with subsequent control over the patient's coagulopathy. Treatment is unnecessary unless their expansion causes symptoms. In cases of giant hepatic haemangiomas suspected on radiological investigation, intervention is necessary since clinical symptoms due to rapid growth are present or may cause complications.*
We report a case of 36 year old female presenting with the lump abdomen and she underwent exploratory laparotomy and histopathology confirm the diagnosis of cavernous haemangioma of liver and tuberculosis of ascending colon.
Keywords: *Colon, Haemangioma, Liver, Tuberculosis*

I. Introduction

The Haemangioma is a congenital vascular malformation.Cavernous haemangioma (CH) is the most common benign tumor in the liver[1]. The liver is also the most common of the visceral organs to contain haemangiomas. CH shows a female predominance and is seen more frequently in adults than children. The majority of CH present incidentally[2,3]; the remainder of cases present with abdominal mass or distention, and, rarely, pain from intratumoral thrombosis or rupture[4]. Portal hypertension has been reported in association with CH[5]. Coagulopathies have also been found in association with CH, including Kasabach-Merritt syndrome, microangiopathic hemolytic anemia, and erythrocytosis[6,7]. Other associations include cystic diseases of the liver and pancreas, Billiary hepatic disease, tuberous sclerosis, and focal nodular hyperplasi1. CH is a benign tumor, although cases of rapid enlargement are seen as a result of pregnancy and exogenous estrogens[8,9].

Haemangiomas in the liver greater than 4-5 cm in diameter are usually defined as giant hepatic haemangiomas, according to several reports[16]. In cases with giant hepatic haemangiomas, intervention is necessary since clinical symptoms due to rapid growth are present[16]. Detailed follow-up imaging examinations of giant hepatic haemangiomas are essential for relevant medical treatment or surgical intervention. The diagnosis of CH is generally secured on radiologic examination; the most sensitive and specific method is by Tc-99m blood pool single emission computed tomography (SPECT)[10,11]. If considered necessary, a core-needle biopsy is diagnostic but can lead to bleeding complications. CH may be followed; symptomatic tumors or those with increased risk of bleeding are resected.

II. Case study

A 36-year old female visited to surgical OPD with the complaints of abdominal lump of 1 year. She had vomiting and dyspepsia for 6 months. She had low grade fever and constipation since last 6 months. She also complaints cough 2 day which was predominantly non purulent. She was complaining of diffuse abdominal pain since several months and there was no history of any functional sign.

On physical examination the patient was slightly pale without jaundice. A lump was palpable in epigastric region which causes mild distention was immobile and slightly painful. There was no ascites and no collateral venous circulation.

On admission patient have pulse 76/min, B.P. 120/80mmhg and Respiratory rate – 16/minute

Ausculatation –Bowel sound were normal and Heart sound -S1and S2 were normal.

Chest X ray p.a. view – no evidence of any cardiac and pleuro pulmonary lesion seen.

Renal function test were normal. Liver function test were normal and reveals Serum Total Bilirubin – 0.78mgm%, Serum conjugated Bilirubin – 0.40mgm%, Serum unconjugated bilirubin – 0.38mgm%,Serum Total protein – 5.0gms%, Serum Albumin – 2.2 gms%, Serum Globulin – 2.8gms%, Serum alkaline phosphatase – 170.4U/L, S.G.O.T.- 19.2U/L, S.G.P.T. -18.4U/L. Bleeding time – 1min 55sec, Clotting time – 03min 30sec were normal.Serum electrolytes were within normal limits. Serum calcium – 9.26mgm%, Serum sodium – 131.3mmol/l, Serum potassium – 3.4mmol/l, Serum chlorides – 92.0mmol/l, ionic calcium -3.96mg/dl

Computed tomography scan of the abdomen including pelvis with oral and IV contrast – reveals ileocolic intussusception with an irregular homogenously enhancing soft tissue density intralumnal polypoidal lesion in the proximal ascending colon. It measures approx2x3.3x5.4 cm .

There is large hypodense lesion within the mesentery in the epigastric region which shows nodular peripheral enhancement and few calcific and a haemorrhage area within suggestive a large mesenteric haemangioma. It measures approx. 12x12.7x6.2cm .

The liver is normal in size shows three small hypodense lesion. The largest in right lobe measures 1.6x1.2cm. Also there are three small hepatic haemangioma. Minimal ascites. No lymph node enlargement is seen in abdomen or pelvis. The stomach, small and large bowel loops do not show any obvious abnormality. The gallbladder, pancreas, spleen, adrenals, and kidneys are within normal limits.

Hepatitis B and C virus markers were negative and alpha feto-protein level was in normal value.

Complete blood count – Hb -5.4gm% Total WBC count 11,100/cumm, Neutrophil- 73%, ESR – 150mm in first hour

On PBF - Microcytic hypochromic anaemia with Neutrophilia reported.

Patient was severe anaemic so 4 unit of packed RBC was transfused after this patient haemoglobin was 11gm% and fit for surgery. Patient underwent exploratory laparotomy. A large mass attach to left lobe of liver was removed. A polypoidal mass present in ascending colon was also removed. Gross specimen was sent for histopathological examination to our department.

Pathologic Features

Gross Pathology. The tumor was well-circumscribed globular soft tissue mass measuring 13x11x5cm in size. External surface was red-brown in colour with prominent vascular marking. On cutting haemorrhgic fluid comes out. Tumor was spongy in texture. Cut surface was honeycombed and red brown in colour with sclerotic fibrous septa present in between as grey white band (figure 1). Multiple section was taken from representative areas and stained with hematoxyline and eosin and examined under microscope.

A separately received single multinodular mass measuring 5.0x3.5x3.5cm in size from ascending colon. The cut surface was grey white in colour.

Microscopic Features.

Sections show varying size and shapes cavernous vascular channels lined by a single layer of flattened endothelial cells without cytologic atypia or mitotic activity (Figure 2,3). The walls of these channels consist of thin fibrous septa. At places myxoid changes and haemorrhage present.

In between the cavernous sinuses normal liver parenchyma also present (Figure 4,5) .

Biopsy polypoidal mass colon –

Histopathological features are suggestive of inflammatory fibroid polyp with numerous non caseating and caseating epitheloid granuloma suggestive of tubercular granuloma. Patient was treated with category III antitubercular treatment according to RNTPC guideline for intestinal tuberculosis.On clinical, radiological, gross and microscopic finding a diagnosis of cavernous haemangioma of liver and tuberculosis of ascending colon was made.

III. Figures

Figure 1 - Cut surface of tumor showing honeycombed appearance and red brown in colour with sclerotic fibrous septa.

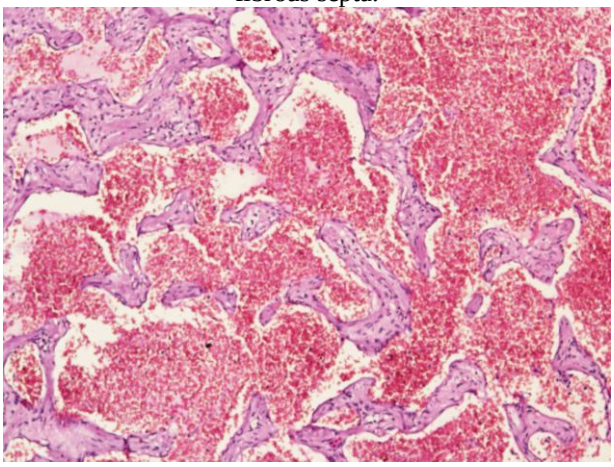

Figure 2 - Sections show varying size and shapes cavernous vascular channels lined by a single layer of flattened endothelial cells.(Low power)

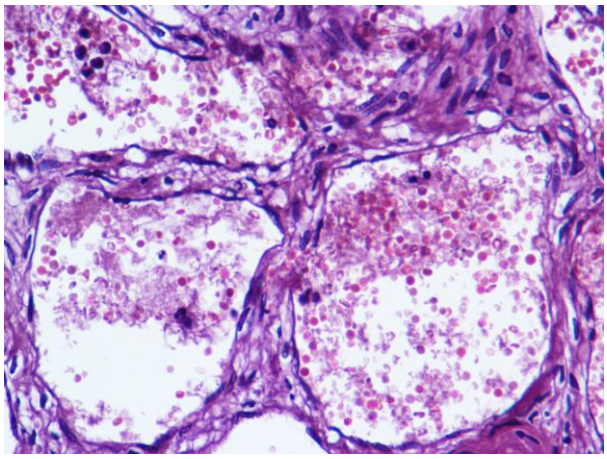

Figure 3 - Sections show varying size and shapes cavernous vascular channels lined by a single layer of flattened endothelial cells.(High power)

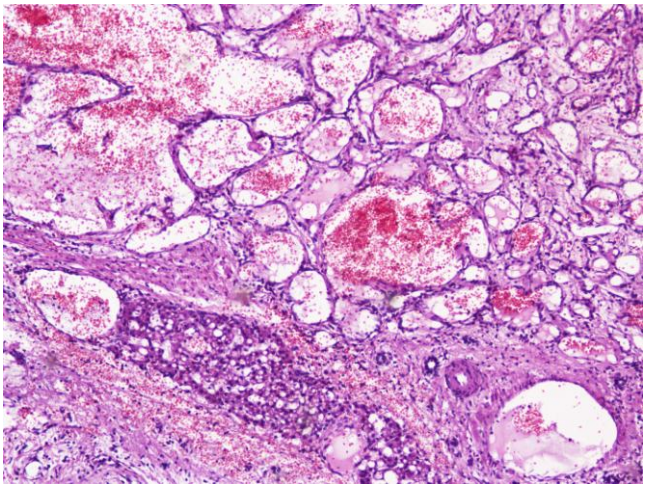

Figure 4 - Sections show varying size and shapes cavernous vascular channels lined by a single layer of flattened endothelial cells with hepatic parenchyma.(Low power)

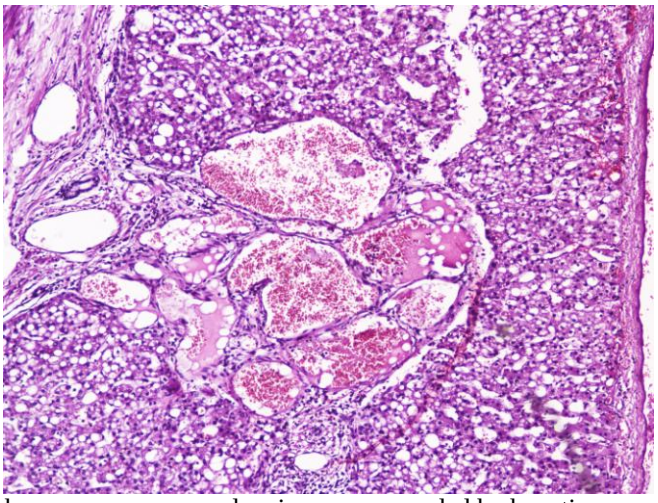

Figure 5 - Sections show cavernous vascular sinuses surrounded by hepatic parenchyma. (Low power)

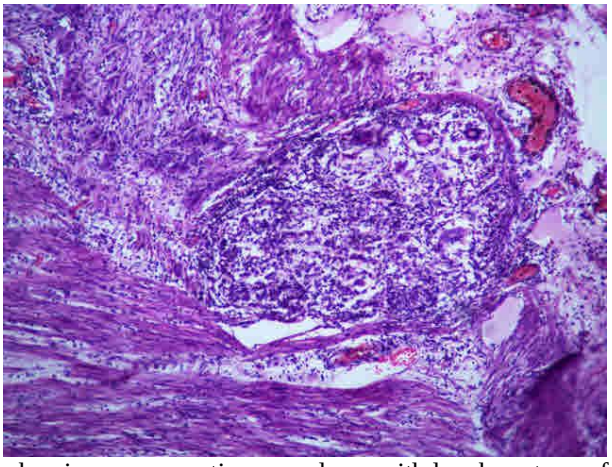

Figure 6 – showing non caseating granuloma with langhans type of giant cells

IV. Discussion

The reported incidence rate of hepatic haemangiomas is approximately 2%. The prevalence rate at autopsy is as high as 7.4%. The widespread use of noninvasive abdominal imaging modalities has led to increased detection of asymptomatic lesions in vivo. Women, especially with a history of multiparity, are affected more often than men. The female-to-male ratio is 4-6:1. Hepatic haemangiomas can occur at all ages. Most hepatic haemangiomas are diagnosed in individuals aged 30-50 years. Female patients often present at a younger age and with larger tumors. Multiple hepatic haemangiomas have been reported in patients with systemic lupus erythematosus.[12]

A large proportion of infants are asymptomatic and the tumor is noted as abdominal distention or mass[1].

Infantile haemangioma is a common tumor in infancy. It may be seen in 5-10% of children aged 1 year. The haemangiomas typically regress during childhood. Typically, the tumors affect the skin and subcutaneous tissue. Occasionally, they affect the liver. Recently, case reports described the regression of infantile haemangiomas after treatment with propranolol.[13,14]

Hepatic haemangiomas are more common in the right lobe of the liver than in the left lobe. Haemangiomas of the liver are usually small and asymptomatic. They are most often discovered when the liver is imaged for another reason or when the liver is examined at laparotomy or autopsy. Larger and multiple lesions may produce symptoms. Goodman noted that symptoms are experienced by 40% of patients with 4-cm haemangiomas and by 90% of patients with 10-cm haemangiomas.[15]

Right upper quadrant pain or fullness is the most common complaint.

Most infants come to clinical attention with gastrointestinal complaints such as nausea and vomiting, or symptoms of thoracic compression, including respiratory compromise. Other clinical presentations are congestive heart failure, liver failure, jaundice, and fever.

In some cases, pain is explained by thrombosis and infarction of the lesion, hemorrhage into the lesion, or compression of adjacent tissues or organs. In other cases, pain is unexplained.

The only findings upon physical examination, seen infrequently, are an enlarged liver or the presence of an arterial bruit over the right upper quadrant. Rarely, haemangiomas may present as a large abdominal mass. Other atypical presentations include the following: (1) cardiac failure from massive arteriovenous shunting, (2) jaundice from compression of the bile ducts, (3) gastrointestinal bleeding from hemobilia, and (4) fever of unknown origin.

Rarely, large tumors rupture spontaneously or after blunt trauma. Patients may present with signs of circulatory shock and hemoperitoneum. Early satiety, nausea, and vomiting may occur when large lesions compress the stomach, producing gastric outlet obstruction.

One case has been reported of lower extremity edema caused by compression of the inferior vena cava by a cavernous haemangioma of the caudate lobe of the liver.

In a small percentage of cases, Kasabach-Merritt syndrome may occur.

Routine laboratory tests - Results are usually normal. Thrombocytopenia can result from sequestration and destruction of platelets in large lesions. Hypofibrinogenemia has been attributed to intratumoral fibrinolysis. Other reported laboratory findings include anemia, hyperbilirubinemia, and elevated aspartate aminotransferases (AST). AFP is generally not elevated above the level expected for the age of the infant[1].

Normal alpha-fetoprotein, CA 19-9, and carcinogenic embryonic antigen (CEA) levels bolster clinical suspicion of a benign hepatic mass lesion.

Pathologic Findings.

Grossly, CHs are usually single and located in the right lobe. They range in size from less than 1 cm to more than 30 cm in greatest dimension. They are often subcapsular but can also be located deep within the liver. If multiple lesions are present throughout the liver, then the term diffuse haemangiomatosis may be used. The tumors are well circumscribed and may have a thick, fibrous band between the tumor and the normal liver parenchyma. The gross appearance varies depending on the amount of cavernous change versus fibrosis. Most are spongy or honeycombed with central fibrosis and large hemorrhagic areas that compress easily. Thrombosis, fibrosis, and calcification may occur. Pedunculation may be seen in larger tumors. Less commonly, CH may be necrotic or small, firm, and white.

Microscopically, the tumor contains large, variably sized, blood-filled spaces lined by a single layer of flat endothelial cells. Organized thrombi are often present. The stroma of the tumor is generally fibrous and occasionally shows myxoid change. Fibrosis may be seen; if extensive, the lesion is termed a sclerosed haemangioma. Immunohistochemistry (IHC) evaluation is generally not necessary because the H&E appearance of CH is distinctive.

Differential Diagnosis

Tumors in the differential diagnosis of CH include lymphangioma, peliosis hepatis, and hereditary hemorrhagic telangiectasia.

Lymphangioma is a rare tumor; histologically, the tumor is also composed of dilated spaces that contain lymph rather than blood. The IHC marker D2-40 will highlight the lymphatic spaces. Peliosis hepatis also contains dilated blood-filled spaces; however, the cavities are not lined by endothelium.

In hereditary hemorrhagic telangiectasia (Olser-Weber-Rendu disease), the liver contains small, sometimes dilated vessels diffusely distributed throughout the organ.

Infantile Hemangioendothelioma In this lesion, multiple variably sized, blood-filled cysts are present diffusely within the liver. The characteristic feature distinguishing this from a cavernous haemangioma is the lack of an endothelial lining.

V. Conclusion

Giant Hepatic haemangiomas are evolve to spontaneous rupture leading to haemorrhagic acute abdomen. Surgery is mandatory and the resection of the Haemangioma will depend on the clinical condition of the patient and on the relationship of the tumor with the vascular structures of the liver.

References

[1]. Ishak KG, Goodman ZD, Stocker JT, eds. Tumors of the Liver and Intrahepatic Bile Ducts. Washington, DC: Armed Forces Institute of Pathology, 2001.
[2]. Choi BY, Nguyen MH. The diagnosis and management of benign hepatic tumors. J Clin Gastroenterol 2005;39(5):401-412.
[3]. Trotter JF, Everson GT. Benign focal lesions of the liver. Clin Liver Dis 2001;5(1):17-42, v.
[4]. Tsai HP, Jeng LB, Lee WC, et al. Clinical experience of hepatic haemangioma undergoing hepatic resection. Dig Dis Sci 2003;48(5):916-920.
[5]. Takahashi T, Katoh H, Dohke M, et al. A giant hepatic haemangioma with secondary portal hypertension: a case report of successful surgical treatment. Hepatogastroenterology 1997; 44(16):1212-1214.
[6]. Watzke HH, Linkesch W, Hay U. Giant haemangioma of the liver (Kasabach-Merritt syndrome): successful suppression of intravascular coagulation permitting surgical removal. J Clin Gastroenterol 1989;11(3):347-350.

[7]. Shimizu M, Miura J, Itoh H, et al. Hepatic giant cavernous haemangioma with microangiopathic hemolytic anemia and consumption coagulopathy. Am J Gastroenterol 1990; 85(10):1411-1413.
[8]. Saegusa T, Ito K, Oba N, et al. Enlargement of multiple cavernous haemangioma of the liver in association with pregnancy. Intern Med 1995;34(3):207-211.
[9]. Conter RL, Longmire WP, Jr. Recurrent hepatic haemangiomas. Possible association with estrogen therapy. Ann Surg 1988;207(2):115-119.
[10]. Zheng JG, Yao ZM, Shu CY, et al. Role of SPECT/CT in diagnosis of hepatic haemangiomas. World J Gastroenterol 2005;11(34):5336-5341.
[11]. Schillaci O, Filippi L, Danieli R, et al. Single-photon emission computed tomography/computed tomography in abdominal diseases. Semin Nucl Med 2007;37(1):48-61.
[12]. Suzuki T, Tsuchiya N, Ito K. Multiple cavernous haemangiomas of the liver in patients with systemic lupus erythematosus. J Rheumatol. Apr 1997;24(4):810-1.
[13]. Tan ST, Itinteang T, Leadbitter P. Low-dose propranolol for multiple hepatic and cutaneous haemangiomas with deranged liver function. Pediatrics. Mar 2011;127(3):e772-6.
[14]. Starkey E, Shahidullah H. Propranolol for infantile haemangiomas: a review. Arch Dis Child. Sep 2011;96(9):890-3.
[15]. Goodman Z. Benign tumors of the liver. In: Okuda K, Ishak KG. Neoplasms of the liver. Tokyo: Springer-Verlag; 1987:105-125.
[16]. Masaki Maruyama, Osamu Isokawa, Koki Hoshiyama, Ayako Hoshiyama, Mari Hoshiyama, and Yoshihiro Hoshiyama, "Diagnosis and Management of Giant Hepatic Haemangioma: The Usefulness of Contrast-Enhanced Ultrasonography," International Journal of Hepatology, vol. 2013, Article ID 802180, 6 pages, 2013. doi:10.1155/2013/802180.