UNUSUAL PRESENTATION OF CAPILLARY HEMANGIOMA OF LIVER IN A NEONATE: A CASE REPORT

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ABSTRACT

Here we report a case of hepatic capillary hemangioma in a neonate with a small bowel obstruction. It is a very rare case in view of site and presentation. With female predominance, it occurs as a single mass and are clinically asymptomatic. Microscopically it is a well-defined tumor composed of capillary-sized vessels lined by plump endothelial cells with bland nuclear features. Capillary hemangioma is very rare.

KEYWORDS:
Capillary, Haemangioma, Neonate, Obstruction.

INTRODUCTION

Hepatic hemangiomas are congenital vascular malformation, considered the most common benign mesenchymal hepatic tumors, composed of masses of blood vessels that are atypical or irregular in arrangement and size. Malignant transformation is extremely rare.

Hepatic hemangiomas are classified as primary benign vascular tumors of the liver, and can be divided into two major groups: (1) capillary hemangiomas, generally peripheral, small and sometimes multiple; and (2) cavernous hemangiomas, which are rarer and larger, also known as giant hemangiomas when larger than 4-5 cm occasionally these can reach up to 20-30 cm.

CASE REPORT

A 1-month old male child was admitted with bilious vomiting, abdominal distension and not passing motion since 2 days. There was not significant perinatal history. Routine blood investigation including liver function tests were in normal limits with stable vitals. X-ray of abdomen showed multiple air fluid level with calcification in left upper quadrant. Ultrasound of abdomen showed small bowel obstruction. Our patient was then scheduled for surgery. A laparotomy was performed, there was a mas of 5×5 cm arising from margin of the left lobe of liver with adhered small bowel loops. Bowel separated from the mass and excision of mass was done and sent for histopathological examination. The case was diagnosed as capillary hemangioma of liver. The post-operative course was uneventful and patient was discharged 7 days after surgery.

DISCUSSION

Hepatic hemangiomas are congenital hamartomatous lesions of the liver that grow silently over the years. Financial or Other, Competing Interest: None. Submission 16-02-2016, Peer Review 20-05-2016, Acceptance 26-05-2016, Published 20-06-2016.

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the patients. Their size varies from a few millimeters to over 20 cm. Those lesions larger than 5 cm are reported as giant hemangiomas. Most cases are asymptomatic (Especially when smaller than 4 cm), but few patients may present a wide variety of clinical symptoms. They can induce intermittent right upper quadrant pain related to focal necrosis or pain from capsular distension as the tumor grows. Thrombosis, infarction, haemorrhage into the lesion and compression of adjacent structures are other possible cause of pain. Giant hemangiomas can also cause biliary colic, obstructive jaundice and gastric outlet obstruction. In our case patient present with small bowel obstruction.

The right hepatic lobe, especially its posterior segment, is the most common site of appearance of these lesions. They are often subcapsular, well circumscribed and unencapsulated. Structurally, hemangiomas are composed of venous lakes, coated with endothelial tissue plus clots and calcification, separated by connective tissue septa, where the blood circulates slowly. The growth of these tumors occurs by vascular ectasia, and never by hyperplasia or hypertrophy. In our case there was calcification in plane abdomen x-ray film.

Imaging studies used in the diagnosis of hepatic hemangiomas include Ultrasound, dynamic contrast enhanced computed tomography scanning, magnetic resonance imaging, hepatic arteriography, digital subtraction angiography and nuclear medicine studies. The treatment of hepatic hemangioma should be decided based on the size and location of the tumour. Small hemangiomata (<4 cm) can be managed by observation and as, in most cases, hepatic hemangioma are asymptomatic they should be followed up by means of periodic radiological examination. Surgery should be restricted to specific situations.

Absolute indications for surgery are spontaneous or traumatic rupture with haemoperitoneum, intratumoral bleeding and consumptive coagulopathy (Kassaback-merrit syndrome). Persistent abdominal pain, obstructive jaundice, portal hypertension, superficial location of tumors larger than 5 cm with risk of rupture, pain and uncertain diagnosis are all relative surgical indications. In our case presentation was small bowel obstruction with bilious vomiting which is very rare presentation of hemangioma.

The proposed surgical procedures for the treatment of liver hemangioma are as follows: (1) anatomic, nonanatomic resection, enucleation. Enucleation is the procedure of choice to treat giant hemangiomas, especially in superficial lesions but should be discouraged for intra hepatic lesions because of large scale bleeding. This procedure has a major advantage when compared to hepatectomy, the greater preservation of the parenchyma, ligation of the hepatic artery (In cases where it is not possible to remove the tumor, but its benefit is suspicious); (2) selective portal vein embolization (Reduces the size of the lesion when the tumor is too big to be removed); and (3) liver transplantation.

Surgical resection and enucleation are considered the treatments of choice. The size and location of a lesion are decisive when the surgeon has to determine whether to perform either a formal segmental resection or an enucleation. Both procedures are typically performed by an open approach although laparoscopy can be both safe and well tolerated in some cases. Lesions of massive or diffuse nature, proximity to vascular structures and pre-existing comorbidities are limiting factors to surgical resection. In the absence of tumor growth. Steroid therapy, estrogen therapy and some pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and several pharmacologic agents have been postulated to cause tumor growth.

No genetic or familial mode of inheritance has been clearly described, although moser et al reported on a large family of Italian origin in which 3 female patient in successive generation had large symptomatic hepatic hemangiomas. Several pharmacologic agents have been postulated to cause tumor growth. Steroid therapy, estrogen therapy and pregnancy can increase the size of already existing hemangioma. Xiao described that hemangiomas have estrogen receptors, an indication that these tumors may be target tissue for oestrogens.

It is estimated that about 20% of the general population present hepatic hemangiomas and the prevalence in autopsy studies ranges between 0.4%−7.4%. These tumors most frequently affect females (80%) and adults in their fourth and fifth decades of life. In our case it affected male neonate. The hepatic hemangiomas are often solitary although multiple lesions may be present in both hepatic lobes in up to 40% of

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**Fig. 3: Liver margin after excision**

**Fig. 4: Excised specimen**
promoting factors such as estrogen therapy, hemangiomas rarely recur after resection.¹

Radiofrequency ablation (Open or laparoscopic) has been successfully used to improve abdominal pain in symptomatic hemangiomas. Other procedures such as radiotherapy should be reserved for poor candidates for surgery. It can produce regression of the hemangioma with minimal morbidity.

Orthotopic liver transplantation is occasionally offered to specific patients, including those with symptomatic and large or diffuse lesions.

CONCLUSION
Hemangiomas are common benign tumors of the liver, generally detected accidentally during a radiological screening performed for other reasons. In symptomatic cases, surgical treatment should be preferred. Emergent hepatic resection has been the treatment of choice, but has high operative mortality. Preoperative transcatheter arterial embolization (TAE) can significantly improve outcomes in such cases. Hepatic capillary hemangioma should be included in the differential diagnosis of hypervascular hepatic tumors and regarded as a distinct disease entity among hepatic mesenchymal tumors.

REFERENCES