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Case Report

Laproscopic Resection of a Solitory Pedunculated Hepatic Hemangioma

Anjana Vasudevan[1], Kaliyappa C[2*], Ponniah Iyyappan[3*]

[1]Department of general surgery, Sri Ramachandra Medical College and Research Institute SRMC, Chennai, India

[2]Department of general surgery, Professor, Sri Ramachandra Medical College and Research Institute SRMC, Chennai, India

[3]Department of general surgery, Assistant Professor, Sri Ramachandra Medical College and Research Institute SRMC, Chennai, India

Abstract

Hemangioma is the most common benign liver tumor, and affects 3% to 20% of the general population. These benign tumours can occur in people of all ages, but are more commonly found in young adult females. Hemangioma is usually asymptomatic and diagnosed incidentally. For most patients, the natural history of cavernous hemangiomas in the liver remains uneventful and surgical intervention can be avoided. Here we present a 60-year-old post-menopausal female who was admitted with complaints of pain in the right hypochondrium for the past one year. USG abdomen was done which showed a mass below the liver. CECT abdomen was also done which revealed a solitary, pedunculated liver haemangioma which was 6 cms in the largest diameter, arising from the 6th lobe of the liver and blood supply from the right hepatic artery. In view of the patient's symptoms, she was taken up for laparoscopic resection of haemangioma and patients subsequent follow ups were uneventful.

Introduction

Haemangioma is the most common form of benign liver tumour. Incidence of hepatic haemangioma is about 3% to 20% of the general population. These tumours mostly occur in young adult females. These are usually asymptomatic and are diagnosed incidentally. For most patients, these hepatic haemangiomas remain uneventful hence any intervention may be avoided. (Clinic, 2015)

Case

Here we present a case of A 60-year-old post-menopausal female who was admitted with complaints of pain in the right hypochondrium for the past one year. USG abdomen was done which showed a mass below the liver. A CECT abdomen was also done which revealed a solitary, pedunculated liver haemangioma arising from the 6th lobe and blood supply from the right hepatic artery. In view of the same this patient was taken up for diagnostic laparoscopy followed by resection of the haemangioma. HPE reports suggested a cavernous liver haemangioma, and patients subsequent follow ups were uneventful. Table 1

Discussion

Haemangioma is a congenital vascular malformation and it is the most common benign tumour of the liver. Haemangiomas are mesenchymal in origin but some authorities consider them to be benign congenital hamartomas. Incidence of Haemangioma is 3% to 20% of the general population. These occur in young adult females and are mostly incidental finding [1,2].

The incidence of haemangiomas is highest in the 3rd to 5th decades of life, and they are more common in women. The growth of haemangiomas may be related to hormone levels, and exposure to high levels of oestrogen and progesterone, such as occurs with multiparity, pregnancy, and oral contraceptive use, may be the reason the condition is more common in women [3,4]. However, the pathogenesis of hepatic haemangiomas is still controversial.

The aetiology of hepatic haemangiomas is not completely understood. They usually originate from the proliferation of vascular endothelial cells, and enlarge by ectasia rather than hyperplasia. They are well-circumscribed tumours with a clear fibrous sheath that separates them from the hepatic parenchyma, and their blood supply originates from the hepatic artery [5,6]. No malignant changes have been reported in hepatic haemangiomas in long-term follow-up.

Hepatic haemangiomas are usually asymptomatic, patients have normal liver function, and the course is typically long and uneventful. Because of the absence of symptoms, the size of hepatic haemangiomas can vary greatly when discovered. Giant haemangiomas are defined as tumours with a diameter > 4 cm, and symptoms rarely appear unless the tumour size exceeds 4 cm. The symptoms of giant haemangioma vary from a mild abdominal compressive sensation to hemoperitoneum due to tumour rupture [7,8].

HH do not show any signs and/or symptoms, they are most likely being discovered incidentally during imaging investigations for other unrelated conditions. If symptoms do occur, they are nonspecific, common to many other diseases, especially of digestive origin. Pain in the right hypochondria is the most common complaint; others include decreased appetite, premature satiation sensation, nausea, vomiting, abdominal discomfort: sense of fullness, postprandial bloating, early or late. These symptoms can indicate the presence of a haemangioma or can be caused by other disorders independent of the presence of HH. Physical exam can detect hepatomegaly and very rarely a palpable mass. HH show complications depending on size and location: inflammatory, acute (fever) and chronic; mechanical: rupture,

***Corresponding author*:** Ponniah Iyyappan, Kaliyappa C, Department of general surgery, Professor, Sri Ramachandra Medical College and Research Institute SRMC, Chennai, India, Tel: +918056204433; Fax: +919840852520; E-mail: vasudevan_anjana@hotmail.com

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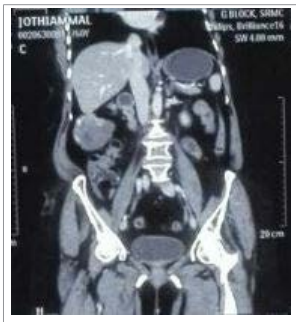
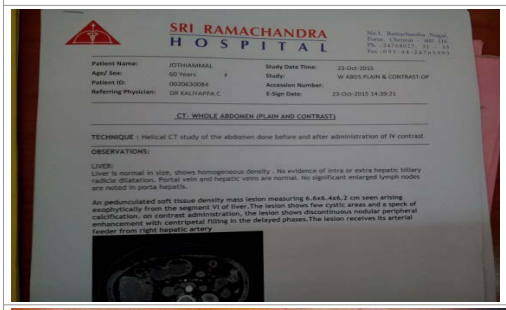
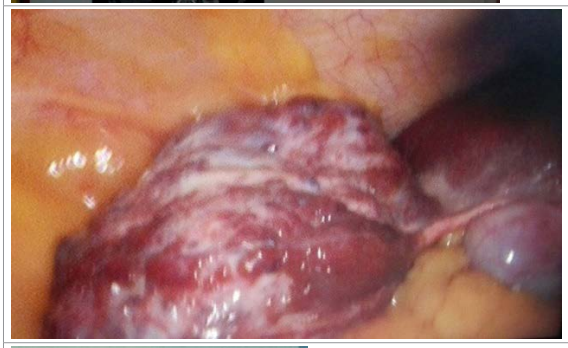
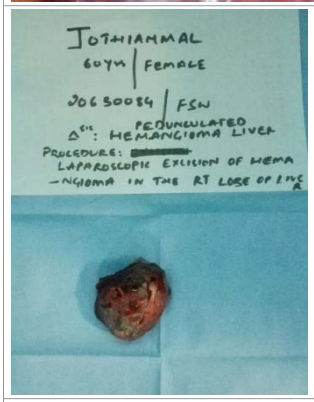
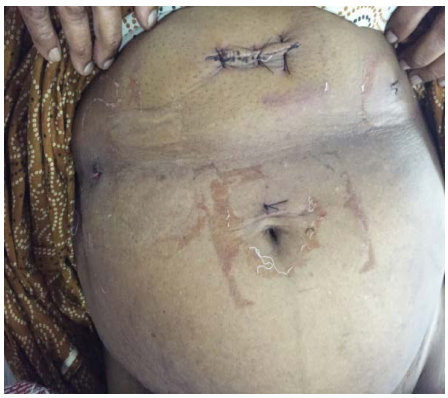
	Pre op CECT whole abdomen
	Pre op CECT whole abdomen report
	Intra op picture of the haemangioma
	Excised specimen – post op
	Post op picture of the patient

spontaneous or traumatic: intraabdominal mass disruption trauma, or marginal trauma when located in the proximity of the costal margin, hence more exposed to trauma, compression of adjacent structures: stomach, resulting in gastric obstruction (early feeling of fullness), bile ducts, leading to jaundice, haemobilia, volvulus / torsion / infarction for pedunculated HH; bleeding: intratumoral or intraperitoneal, with or without consumptive coagulopathy: Kassalbach-Merritt syndrome (HH giant, thrombocytopenia, intravascular coagulation), Osler-Rendu-Weber disease (hereditary telangiectasia: multiple smaller HA on face, tongue, jugal mucosa, gastrointestinal tract, liver), Klippel-Trenaunay syndrome (congenital hemi atrophy nevus flammeus, hemi-mega-encephalopathy), Von Hippel-Lindau disease (cerebral, retinal, pancreatic haemangioma); degenerative: thrombosis, hyalinization, progressive fibrosis and sclerosis becoming central scar. Particular cases of HH: pedunculated, calcified, on liver steatosis, on cirrhotic liver, with massive arteriovenous shunt, complicated with heart failure. Co-pathologies associated with hepatic haemangioma include: most frequently hemangiomatosis, focal nodular hyperplasia, and angiosarcoma [1,2,9].

Predisposing factors of complications of HH: adulthood, chronic medication use (such as steroid use, can accelerate the development of an existing HH), female sex: oestrogen therapy, use of oral contraceptives (increase the risk or increase the size, discontinuing contraceptive regimen can lead to lesion regression, but not necessarily); pregnancy and multiparity (by disrupting oestrogen and progesterone hormone levels, leading to an increase in size of a pre-existing HH); replacement therapy for menopausal symptoms; ovarian stimulation treatment with clomiphene citrate and human chorionic gonadotropin. Gene penetrance or sex hormone proliferative factors could also be an explanation. Physical exam does not come with notable modifications, as do not routine laboratory tests, including liver chemistry [10]. Hypofibrinogenemia occurs due to intratumoral fibrinolysis, while thrombocytopenia is associated with large lesions, being a consequence of spleen sequestration and destruction. Tumour markers: alpha-fetoprotein (AFP), CA 19-9 (carcinogenic antigen 19-9) and carcinogenic embryonic antigen (CEA) within normal limits advocate for the benign nature of the lesion [3,5,11].

Several diagnostic modalities are used for hepatic haemangiomas. Sonography is usually used to screen liver nodules and a hepatic haemangioma presents as a well-defined, lobulated, homogenous hyperechoic mass. Sometimes there is a hypoechoic portion because of haemorrhage, fibrosis, or calcification. For treatment, multiphasic CT has been used to show peripheral nodular or globular enhancement and typical centripetally progressive enhancement. Magnetic resonance imaging is used to define the anatomical relationship of liver Glissonian pedicles and haemangiomas [2,4,7,12].

Asymptomatic patients can be observed with periodic follow ups and imaging studies. Surgery is indicated only for patients with progressive abdominal symptoms, spontaneous or traumatic rupture, rapidly enlarging lesions, Kasabach–Merritt syndrome and unclear diagnosis.

There are various types of surgeries reported for the same. These are liver resection, enucleation, hepatic artery ligation, and liver transplantation. Resection and enucleation are the most common techniques. Enucleation of liver haemangioma is better advised because of its associated lower intraoperative blood loss, fewer overall complications, and shorter hospital stay. However, we have limited data on comparing the results of enucleation with liver resection for hepatic haemangiomas [1,6,8,11,13].

With the Recent advances both liver resection and enucleation are safely performed in specialized centres. However, in haemangiomas greater than 10 cm, massive intraoperative haemorrhage remains a risk, because of the likelihood of major vascular injury. Even though there are various factors to predict intraoperative bleeding and requirement of blood transfusion, the data for these factors are either lacking or are non-existent [4,13,14].

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