Management of Giant Hepatic Hemangiomas: A Case Report

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Giant hepatic hemangioma; Asymptomatic; Surgical treatment versus observation

Introduction

Haemangioma are by far the most common benign tumour affecting the liver, they are especially prevalent in women [1]. In most cases, hemangiomas are small and asymptomatic. The widespread use of non-invasive abdominal imaging modalities has led to an increased detection of various lesions. The relation between the complaints of the patient and the lesion detected however is often unclear. Nevertheless, clinical symptomatology and effects are mostly due to size of these benign lesions. Arbitrary giant haemangiomas have been defined as larger than 5 centimeter (cm) in diameter. Larger and multiple lesions especially in the left liver lobe might cause (acute) symptoms due to compression of adjacent structures, thrombosis or infarction of the lesion. Hemorrhage has been described as well [2]. Rarely, large hemangiomas rupture, either spontaneously or following blunt abdominal trauma. Surgical treatment then is inevitable and may lead to complete relief of symptoms. The management of large hepatic hemangiomas in asymptomatic patients, however, is more controversial, as discussed by Duxbury & Garden [3] and Schnelldorfer et al. [4].

Case Report

A 55-year old woman presented at the outpatients clinic with right upper quadrant pain and abdominal distention. A year before she was diagnosed with endometrial carcinoma, stage IA, and underwent abdominal hysterectomy and removal of both ovaries. She had not received oral contraceptives in the past. Pre-operative evaluation for extent of disease had shown several lesions in the liver suspicious of hemangiomas on ultrasonography. The two largest lesions were 19 and 5 cm respectively. Computed tomography and magnetic resonance imaging supported the diagnosis. The giant hemangioma was located in an enlarged right lobe of the liver and the smaller one in the left lobe (Figure 1).

The patient told that she suffered from abdominal pain for almost two years. She described it as a dull, annoying pain in the right upper quadrant. The pain was related to exercise. Her defecation pattern had been normal and remained unchanged over the years. She didn't report episodes of fever. At physical examination there were no signs of lymphadenopathy. The edge of the right lobe of the liver reached 4 cm below the costal margin. Examination of the skin didn't demonstrate bleeding sites. The patient’s body mass index was 30. Laboratory investigation showed normal levels of fibrinogen and platelets. Liver function tests were all normal, serum alkaline phosphatase 41 U/l (n 25-120) and Gamma GT 30 U/l (n <35), which remained unchanged over time. There were no signs of coagulopathy. Without specific treatment or intervention, the patient had no complications over a follow-up period of four and a half year.

Discussion

Hepatic hemangiomas are the most common focal liver lesions, often detected incidentally, with a reported incidence rate of approximately 2%, Choi & Nguyen [5] and Gandolfi et al. [6]. At presentation there were no signs of severe symptoms or complications, which can occur in the setting of Kasabach-Merritt syndrome, a condition associated with a consumptive coagulopathy, as reported by Malagari et al. [7]. A large retrospective cohort study by Schnelldorfer et al. [4] reported potentially life-threatening complications in 2% of 233 non-operative patients with giant hepatic hemangioma.
during a follow-up of 11 years. In the small number of patients who underwent surgery for potentially life-threatening complications, perioperative mortality was 0%. Size of hemangiomas in this study was not associated with adverse events, confirming data from an earlier study by Terkivatan et al. [8]. Giant hemangiomas have been reported up to 27 cm in diameter.

Besides conservative management hepatic hemangiomas have been treated with a wide array of therapies. Traditionally, surgical resection and surgical enucleation are the treatments of choice, Singh et al. [9]. However, it might be very difficult, even for experienced clinicians, to decide whether a patient should be operated or not. A well designed prospective trial hasn’t been performed yet. On the other hand perioperative complications have been reported. In the same recent large cohort study by Schnell dorfer et al. [4], 56 patients underwent surgery primarily. In 14% of these patients perioperative complications have been reported, including potentially life-threatening complications in 7%. These findings all resemble previous data in literature, as reported by Pietrabissa et al. [10], Yoon et al. [11] and Herman et al. [12]. None of the operative patients had persistent or new onset of hemangioma associated symptoms after surgical resection. Minimally invasive therapies for hepatic hemangioma include arterial embolization and radiofrequency ablation, Malagari et al. [7] and Gao et al. [13]. Orthotopic liver transplantation has been performed as treatment in rare circumstances, Vagefi et al. [2].

**Conclusion**

The management of large hemangiomas should be conservative, especially in asymptomatic lesions. Indications for surgical or angiographic intervention include: bleeding, Diffuse Intravascular Coagulation (DIC), progressive abdominal pain and high-output cardiac failure. Taking into account the absence of severe symptoms and patients history, we closely observed the patient for more than five years. Until now, the hemangiomas haven’t changed in size and no complications or severe symptoms have occurred.

**References**


