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Editorial Open Access

Enucleation is the Safe and Quick Surgical Procedure to Treat Liver Hemangiomas

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Editorial

Hemangioma, which is a congenital vascular malformation, constitutes the second common benign liver tumor after metastases. Liver hemangioma is mostly small in size, asymptomatic and so discovered incidentally during imaging studies or at laparotomy. A liver hemangioma is qualified to be giant when having a size greater than 5 cm. The lesion size of 5 cm was chosen because none of hemangiomas smaller than 5 cm were symptomatic [1]. Liver hemangiomas management is well defined. Conservative approach (observation) for asymptomatic hemangioma even very large size is safe with very lower risk of adverse events [2]. Surgery is well established and accepted option treatment of symptomatic hemangiomas with debilitating symptoms [3,4].

However, in order to increase symptom resolution after surgery, symptomatic patients should be carefully assessed to ensure symptoms are related to hemangioma. Furthermore, size alone is not accepted as an indication for surgery as well as growth and diagnosis uncertainty have become an exceptional conditions requiring surgery [5,6]. Very rare complications such as coagulation disorders, bleeding and rupture, have been considered as an indication for emergency surgical treatment [2,7,8]. So when indicated, surgery remains the radical and most effective method to treat liver hemangioma [9]. Since the description and definition of liver segmental anatomy and vascular planes, performing antomic hepatectomy had become more safer and easier [2].

Originally, liver resection was considered the procedure of choice for hemangioma treatment until the description of enucleation technique by Alper et al. [10]. The principle of enucleation is based on the presence of a plane separing hemangioma from normal liver parenchyma. This identifiable and cleavable plane makes easier individualizing and dividing vessels supplying hemangioma decreasing thus the risk of bleeding and blood loss [11]. The rarity of bile ducts in the plane dissection reduces the risk of postoperative bile leak and enucleation preserves healthy liver parenchyma avoiding unnecessary normal parenchyma loss [11]. The recent published met-analyses comparing outcomes between enucleation and liver resection of hemangioma demonstrated the absence of surgery-related death in both technique, and enucleation was associated with significant lower blood loss, lower operative time and lower morbidity, concluding that enucleation was safer and quicker with lower morbidity and blood loss [3,4]. Enucleation is a precise, minimal invasive and effective technique that meets the requirement of precise liver surgery and so it is advocated by most surgeons [9,12-14].

The enucleation is more preferred in peripheral and right sided located hemangioma and in multiple locations in order to preserve more normal liver parenchyma. However, eneucleation of very large centrally located lesion is more likely associated with longer operative time and high blood loss [15]. The risk of bleeding is more related to hemangioma size than the surgical technique [16] and lesion size upper to 10 cm is associated with high risk of bleeding [2]. Also, choosing enucleation procedure depends partly on the preference and the technical skills of surgeon [9].

In extremely large hemangioma with high risk of bleeding and operative difficulties, transcatheter arterial embolization (TAE) have been performed preoperatively in order to reduce tumor size and blood inflow making surgery more easily with lower risk of complications [17-20]. In summary; asymptomatic hemangioma even with very large size is safely observed with lower adverse events. Surgery remains the effective treatment modality in symptomatic or complicated lesion. Symptomatic patients should be assessed to refine symptom-related causes prior to surgery and to increase postoperative symptom relief. Enucleation is a safer and quicker surgical technique to remove liver hemangioma with very lower risk of overall complications, and it is more advocated by surgeons.

Competing Interest

None declared.

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