

Dear Editor,

Re: ¹⁸⁸Rhenium-TDD-Lipiodol in Treatment of Inoperable Primary Hepatocellular Carcinoma—A Case Report

F X Sundram, S W K Yu, J M Jeong, S Somanesan, J Premaraj, M M Saw, B S Tan

Hepatocellular carcinoma (HCC) is a common malignancy that is best treated by surgery. However, in the vast majority, surgery is not possible and alternative treatment options have to be attempted. One of the many treatment options is the use of selective internal radiation therapy (SIRT). The efficacy of SIRT in the management of inoperable HCC has previously been reported with ¹³¹iodine lipiodol as well as with ⁹⁰yttrium.¹ The paper by Sundram et al² has brought to light the feasibility of a new radioactive compound ¹⁸⁸Rhenium tagged to lipiodol. The efficacy of this technique of SIRT lies in the ability to localise the radioactive element in the tumour, in this instance by selective hepatic arterial cannulation and the use of lipiodol which is known to be avidly taken up by HCC. As such, the role of SIRT in HCC management is confined to inoperable HCC that is only present in the liver and is accessible by hepatic arterial cannulation. In the case that was reported by Sundram et al,² the presence of a large intraperitoneal tumour in the lesser sac should preclude treatment using this option as this particular lesion cannot be addressed using this form of therapy. The scans pre- and post-treatment seem to show that the intraperitoneal lesser sac tumour has grown remarkably and caused significant gastric compression. Despite this limitation, the paper does show that appropriate dose therapy with ¹⁸⁸Rhenium-TDD-lipiodol can result in some tumour response and may have a place in management of inoperable HCC in the absence of extrahepatic disease.

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Dear Editor,

Re: In Reply

Dr Ooi has raised an important point. We agree that an intraperitoneal tumour should not be thus treated. However, there are two points that need to be elucidated.

Firstly, this patient was operated on in another country. A laparotomy was performed and this confirmed HCC. The tumour that appears intraperitoneal is an extension from the caudate lobe. Hence, it occupies the space in the lesser sac. The biopsy was performed from this extension.

Secondly, the anatomy of the caudate lobe must be appreciated. Unfortunately, it has been mainly transplant surgeons that have understood the caudate lobe and hence there can be misinterpretation of scans involving the caudate lobe. The caudate comprises the caudate lobe (segment 1A, also known as the posterior dorsal liver by Couinaud, and lies between the middle hepatic vein and IVC) and the caudate process, Segment 1B which extends into the lesser sac. The “caudate lobe” is peculiar in that it derives its portal venous supply from the left portal branch and sometimes both portal veins directly. Its arterial supply is poorly developed and these are through multiple small short branches.¹ This is an important anatomical principle which necessitates discarding the caudate lobe in a liver split for transplantation.^{2,3} Hence, selective chemo-embolisation is technically difficult. The venous drainage is through independent hepatic veins that open directly into the liver. Hence, chemoembolisation of the caudate lobe, which involves the caudate lobe, also known as the dorsal liver by Couinaud, (between the middle hepatic vein and IVC) and the caudate process which extends into the lesser sac, is difficult.

In this case, there was obviously a failure to treat the caudate lobe. The large appearance of the tumour makes it appear intraperitoneal but it is a tumour growing out of the caudate process.

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