A useful imaging modality for monitoring treatment response to hepatocellular carcinoma

October 31 2008

TACE has been widely accepted as a choice of treatment for advanced HCC. CT perfusion is a non-invasive and reproducible technique for assessing perfusion changes due to TACE therapy for locally advanced HCC. However, there are few reports on the application of this technique in evaluating the efficacy of TACE based on quantitative analysis of perfusion parameters.

A research article published on October 7, 2008 in the *World Journal of Gastroenterology* addresses this question. The research team led by Professor from Beijing Friendship Hospital affiliated to Capital Medical University used 64-rows multi-detector CT, which can offer a greater coverage (up to 4 cm) of the tumor and portal vein in the scanning range, to prospectively assess the changes in parameters of CT perfusion pre- and post-TACE treatment of HCC in different response groups, and to correlate the changes with various responses to TACE. CT perfusion scan for patients with HCC allows assessment of perfusion changes due to TACE therapy. This study further investigated the correlation between changes in CT perfusion parameters pre- and post-TACE treatment of HCC and various responses to TACE.

In the PR treatment response group, HAP, HAF and HBV of viable tumors were reduced post-TACE compared with before pre-TACE, while no significant difference was observed in HBF, MTT, PS and PVP pre- and post-TACE. In the SD treatment response group, there was no

significant difference in perfusion parameters pre- and post-TACE. In the PD treatment group, HAP, HAF, PVP and HBF of viable tumors were significantly increased after TACE compared with pre-TACE, while no significant difference was found in other perfusion parameters pre- and post- TACE. Our findings suggest that changes in CT perfusion parameters in viable tumors are correlated with different response of HCC to TACE. Therefore, CT perfusion imaging is a feasible technique for monitoring response of HCC to TACE.

Source: World Journal of Gastroenterology