Reply of “Indication of perfusion contrast-enhanced ultrasound for diagnosing lymph nodes”

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First of all, I would like to thank three professors Naoko Mori et al. [1] for their attention to my article and for their valuable comments!

Our research shows that the negative predictive value of CEUS is 48.8%, which is not very high and of limited significance.

Slaisova et al. [2] showed that the TIC of contrast-enhanced ultrasound in metastatic lymph nodes rose steeply, reached the peak rapidly, and then continued to decline slowly, the peak intensity was less than that of benign lymph node or lymphoma. The sensitivity, specificity and accuracy of CEUS in the diagnosis of metastatic lymph nodes were 84, 79 and 80%, respectively, as reported by Jin et al. [3], ROC of TIC of CEUS in metastatic lymph nodes was smaller than that in benign lymph nodes and lymphoma.

TIC analysis showed that there were significant differences in mean, peak time and peak intensity between malignant lymphadenopathy and its surrounding tissues. The mean and peak ultrasound intensity of malignant lymph nodes were higher than that of the surrounding tissues, and the peak time of benign lymph nodes was similar to that of malignant lymph nodes. There were no significant differences in peak intensity, initial increase time and peak time in this study [4].

CEUS can be used in the differential diagnosis of benign and malignant lymph nodes in China, but the accuracy in the differential diagnosis of benign and malignant lymph nodes is still lacking.

CEUS has high sensitivity in identifying small areas of low or high blood vessels that cannot be detected by Doppler technique. However, the early lymph node metastasis is difficult to be detected by peripheral perfusion because the invasion of the lymph node is too small to change the vascular structure and the actual morphology of the lymph node; moreover, CEUS diagnosis cost is high, lacks the objectivity, therefore at present CEUS in lymph node qualitative diagnosis aspect is still limited, perhaps further studies its diagnosis standard may enhance its diagnosis value.

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