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Reply

We thank Dr. Koizumi for his subtle reading and interest in our work. Definitely epicholedochal vessels are obvious in our Fig. 5C and the obstruction of the main hepatic artery might appear to be too proximal. Embolization of hepatocellular carcinoma is always a delicate balance between optimal embolization and the clinical and biological behavior of the tumor. Even if the strategy is clear and based on peripheral embolization, there is always an individualized outcome.

The strategy in this case was clear and simple. This example was used to demonstrate the additional embolization of the cystic artery. Moreover the clinical outcome and morphologic appearance on CT were very satisfactory.

Extrahepatic collaterals are a well-known phenomenon and, if feeding the tumor, further embolization of extrahepatic collaterals is the procedure of choice.

Our protocols do observe these findings by MD-CT evaluation. CT follow-ups are generally done 6 weeks after embolization, followed by further superselective angiography and embolization via microcatheters, if necessary.

We not only agree with you that proximal embolization using lipiodol NBCA is not necessary, but we have since investigated the effects of additional use of cyanoacrylate versus bland embolization, and found only very limited differences in morphologic and clinical outcome between the two procedures. This evaluation was presented at CIRSE 2005 and we have modified our protocols so that we no longer use cyanoacrylate as a routine procedure.

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