

# Follow-up Study on Recurrence of Hepatocellular Carcinoma in Patients Administrated ACE Inhibitor

Kaoru IWATA, Tetsuro SOHDA, Akira ANAN,  
Makoto IRIE, Yasuaki TAKEYAMA, Satoshi SHAKADO  
and Shotaro SAKISAKA

*Department of Gastroenterology and Medicine, Faculty of Medicine, Fukuoka University, Fukuoka, Japan*

**Abstract :** Background/Aims : Hepatocellular carcinoma ( HCC ) has a higher rate of recurrence after treatment because of its multiple central growth and intrahepatic metastasis in comparison to other cancers. Recent studies have shown angiotensin converting enzyme ( ACE ) inhibitors to reduce the mortality rate of cancer through its inhibitory effect on neovascularization. We therefore examined effects of ACE inhibitors on the growth of HCC which accompanies profound neovascularization. The inhibition of the growth of cancer by ACE inhibitors is said to induce neovascularization. ACE inhibitors are therefore expected to be effective for the treatment of HCC with many newly formed blood vessels. Method : Of the 318 patients who were diagnosed with HCC and received medical treatment initially, 32 patients with a tumor diameter of less than 5 cm and hepatic reserve capacity classified as A or B according to the Child's classification, who take only one kind of antihypertensive agent because of hypertension developing complication, were selected as the subjects. Ten of those patients were taking ACE inhibitors while and 22 patients were taking calcium antagonists. Results: Concerning the clinical features, significant differences were found in the diastolic pressure but not in the number of tumors and tumor diameter between the two groups. The 3-year recurrence rate was 67.5% in the ACE inhibitor group and 62.6% in the calcium antagonist group (  $p=0.851$  ). Conclusion : According to the retrospective investigation, no significant difference in the 3-year recurrence rate was found between the group of ACE inhibitor and calcium antagonist.

**Key words :** Angiotensin converting enzyme ( ACE ) inhibitor, Hepatocellular carcinoma ( HCC ), Calcium antagonist, Recurrent rate of HCC