

■ Sat-088 ■

Influence of AKI on Overall Survival of Patients Receiving Transarterial Chemoembolization for HCC

강북삼성병원 내과

*김건화, 손원, 함철배, 김남희, 김홍주, 조용균

Background/Aims: Hepatocellular carcinoma (HCC) mostly develops in the background of liver cirrhosis. Acute kidney injury (AKI) is an important risk factor for the prognosis in cirrhosis. This study aimed to investigate the effect of AKI on the prognosis of HCC patients undergoing transarterial chemoembolization (TACE). **Methods:** A total of 370 HCC patients with Child-Pugh class A and serum creatinine (SCr) ≤ 1.5 mg/dL undergoing TACE as an initial therapy between 2000 and 2014 were analyzed. We assessed AKI using SCr at 1 day, 2 months, and 4 months after TACE. The AKI stage after TACE is defined as follows: stage 0, no increase of SCr or increase of SCr < 0.3 mg/dl; stage 1, increase of SCr ≥ 0.3 mg/dl or SCr ≥ 1.5 - 2 times from baseline; stage 2, increase of SCr ≥ 2 - 3 times from baseline; stage 3, increase of SCr ≥ 3 times from baseline, or SCr ≥ 4.0 mg/dl with an acute increase of ≥ 0.3 mg/dl, or initiation of renal replacement therapy. We evaluated overall survival of the patients according to AKI stages and related risk factors. **Results:** The mean age was 60.8 years. Among 370 patients, death was observed in 121 patients (33%) and the median time of overall survival was 21 months. The mean SCr levels at pre-TACE, 1 day, 2 months, and 4 months after TACE were 0.9, 0.9, 0.9, and 1.1 mg/dL, respectively. The AKI within 4 months after TACE developed in 43 patients (12%). The AKI stages were stage 0 in 327 (88%), stage 1 in 13 (4%), stage 2 in 12 (3%), and stage 3 in 18 patients (5%). Multivariable analysis shows that the risk factors for AKI development were serum albumin ≤ 3.5 g/dL (odds ratio [OR] 3.44, $p=0.003$), chemoembolization agent: cisplatin (vs. doxorubicin) (OR 3.02, $p=0.015$), BCLC stage B or C (OR 6.48, $p<0.001$), and presence of ascites (OR 9.43, $p<0.001$). Overall survival of HCC patients after TACE is significantly associated with AKI stage in multivariable analysis: AKI stage 1 (hazard ratio [HR] 6.68, $p<0.001$), AKI stage 2 (HR 8.81, $p<0.001$), and AKI stage 3 (HR 16.53, $p<0.001$). **Conclusions:** AKI is an important prognostic factor for mortality in patients with HCC undergoing TACE. The AKI stage and risk factors for AKI development can be helpful to evaluate the prognosis of HCC patients treated with TACE.

Figure 1. Overall survival according to risk factors in patients with HCC: adjusted TMS; (A) pre-TACE AFP, (B) BCLC stage, (C) tumor size, and (D) AKI stage

