Renal failure in patients with hepatocellular carcinoma and ascites undergoing transarterial chemoembolization.

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ABSTRACT

Ascites is often present in patients with hepatocellular carcinoma (HCC) with cirrhosis. Advanced cirrhosis may predispose to renal dysfunction. Acute renal failure (ARF) may occur after transarterial chemoembolization (TACE) for HCC because of radiocontrast agents. This study aimed to investigate the incidence and risk factors of ARF and prognostic predictors in HCC patients with ascites undergoing TACE. A total of 591 HCC patients receiving TACE were enrolled.

In a mean follow-up duration of 19+/17 months, 239 (40.4%) patients undergoing TACE died. Ascites, which was present in 91 (15.4%) patients at entry, independently predicted a poor prognosis in the Cox proportional hazard model [risk ratio (RR): 1.71, P=0.002]. Of these, 11 (12.6%) of 87 patients with complete follow-up developed ARF after TACE. Serum albumin level <3.3 g/dl (odds ratio: 7.3, P=0.009) was the only independent risk factor associated with ARF in the logistic regression analysis. ARF (RR: 2.17, P=0.036), alpha-fetoprotein >400 ng/ml (RR: 1.84, P=0.04), multiple tumours (RR: 2.11, P=0.013), tumour size > or = 5 cm (RR: 2.32, P=0.006) and serum sodium level <139 mmol/L (RR: 2.4, P=0.005) were independent poor prognostic predictors for HCC patients with ascites receiving TACE.

Pre-existing ascites is associated with increased mortality in HCC patients receiving TACE. In HCC patients with ascites, hypoalbuminaemia is associated with the occurrence of post-TACE ARF. Post-TACE ARF is a poor prognostic predictor in this subset of HCC patients.