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### Effect of 4% Gelofusine Plus Antibiotics on Renal Impairment and Mortality in High-risk Cirrhotic Patients with Spontaneous Bacterial Peritonitis

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#### Abstract

**Background:** Spontaneous bacterial peritonitis (SBP) increases the rates of renal impairment and mortality in cirrhotic patients. A previous study showed that cefotaxime plus albumin treatment decreased renal impairment more than antibiotic treatment alone in patients with serum bilirubin > 4 mg/dL or creatinine > 1 mg/dL. 4% Gelofusine is a colloidal volume replacement fluid used for fluid resuscitation and hemodynamic stabilization. Only one study showed that intravenous 4% gelofusine plus antibiotic could decrease the rates of renal impairment and mortality in comparison with the treatment with albumin plus antibiotic in high-risk cirrhotic patients with SBP.

**Objective:** To evaluate the effects of 4% gelofusine plus antibiotics on renal impairment and mortality rates in high-risk cirrhotic patients with spontaneous bacterial peritonitis.

**Material and Method:** Eighteen cirrhotic patients with SBP and serum bilirubin > 4 mg/dL or creatinine > 1 mg/dL were enrolled. Ceftriaxone was given intravenously in doses of 2 g/day. Gelofusine 4% was given intravenously at 1.5 g/kg of body weight at the time of the diagnosis, followed by 1 g/kg on the 3rd day. Renal impairment and mortality rates were evaluated during and after treatment.

**Results:** Five patients (27.8%) had pre-existing renal failure. Infection resolved in 15 patients (83.3%). Renal impairment developed in three patients (16.7%), and six patients (33.3%) died during hospitalization. After one month, the mortality rate was 33.3% (a total of 6 deaths). Patients with renal impairment had higher levels of plasma renin activity than those without renal impairment but the values were not statistically significant.

**Conclusion:** In high-risk cirrhotic patients with spontaneous bacterial peritonitis, treatment with 4% gelofusine intravenously plus antibiotic reduced the incidence of renal impairment but did not reduce mortality in comparison with previous studies. Studies with larger sample sizes may be useful to evaluate these effects.

**Keywords:** Spontaneous bacterial peritonitis (SBP), Renal impairment, 4% gelofusine

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