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The effects of hydroxyethyl starch resuscitation on the early stage of severe acute pancreatitisChong Yang^{1,2}¹University Hospital of Electronic Science and Technology, P R China²Sichuan Provincial People's Hospital, P R China

Objectives: This study aimed to compare the effects of hydroxyethyl starch (HES) 130/0.4 combined with crystalloid solution with those of crystalloid solution alone on inflammatory variables (IL-1, IL-6 and IL-8 and TNF- α), immunologic variables (CD4/8+ T cells), fluid balance (FB) negative (-) rate and renal function for severe acute pancreatitis (SAP) patients.

Methods: In this retrospective study, 59 patients received 6% HES 130/0.4 combined with crystalloid solution for fluid resuscitation (HES group), and 61 patients received only crystalloid solution simultaneously (control group) after admission. The serum values of IL-1, IL-6, IL-8 and TNF- α were measured on days 1, 2, 4 and 8. The peripheral blood CD4/8+ T lymphocyte rates, serum BUN and Cr values were measured on days 1, 4 and 8. The patients with FB (-) rates were recorded from days 1 to 8.

Results: Interaction term analysis (hospital stay and fluid resuscitation methods) based on mixed-effects regression model revealed significantly lower levels of IL-1 [risk ratio (RR): -0.406, P*: 0.041] and TNF- α (RR: -1.189, P*: 0.013) in the HES group compared with control group. The curve's RR difference was not significant for IL-6, CD4/8+ T lymphocyte rate, BUN and Cr values (P*>0.05). There was a significantly higher rate of patients with FB (-) from days 4 to 8 in the HES group (P<0.05).

Conclusion: HES 130/0.4 combined with crystalloid fluid resuscitation could decrease the IL-1 and IL-8 concentration, shorten the duration of positive fluid balance, and preserve patient's immune status and renal function during the early stage of SAP.

Biography

Chong Yang has completed his PhD from Wuhan Union Hospital, Huazhong University of Science and Technology and currently working as a Surgeon in Hospital of the University of Electronic Science and Technology of China and Sichuan Provincial People's Hospital. His main research subject is Severe Acute Pancreatitis and published more than 10 manuscripts in reputed journals and has been serving as an Editorial Board Member of repute.

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