



Modified *Da Chengqi* granules improvement in immune function in early severe acute pancreatitis patients

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ABSTRACT. We investigated the role of modified *Da Chengqi* granules in improving immune function in early severe acute pancreatitis patients. Early severe acute pancreatitis patients who agreed to receive combined treatment of traditional Chinese and Western medicine were randomly assigned to the experimental or control group. All subjects received conventional therapy to support organ function. The experimental group also received modified *Da Chengqi* granules. Cytokine (interleukin-6, interleukin-10, and tumor necrosis factor- α) levels, immunological markers (HLA-DR, Treg, and Th1/Th2), urinary lactulose/mannitol ratio, and endotoxin levels were measured at 1, 3, 7, and 14 days after hospital

admission. The total mortality rate was 11.69% (9/77), which was significantly lower in the experimental group [4.88% (2/41)] than in the control group [19.44% (7/36); $\chi^2 = 3.940$, $P < 0.05$]. Serum interleukin-6, interleukin-10, tumor necrosis factor- α and endotoxin levels and the lactulose/mannitol ratio were significantly lower on day 7 and day 14 than on day 1 in experimental and control groups ($P < 0.01$). Immunological indices were significantly lower in the experimental group than in the control group on day 14 (all $P < 0.01$ or 0.05). HLA-DR-positive cell ratio gradually increased over 14 days in experimental and control groups ($P < 0.01$ vs day 1), but was higher in the experimental group than in the control group by day 14 ($P < 0.05$). Notably, Treg cell prevalence and Th1/Th2 cell ratio deteriorated within 7 days in both groups ($P < 0.01$ vs day 1), but then returned to day 1 levels ($P < 0.01$ or 0.05 vs day 1). Significant differences in Treg levels and Th1/Th2 cell ratio between experimental and control groups were observed on day 14 ($P < 0.01$). These results show that modified *Da Chengqi* granules can improve immune function in early severe acute pancreatitis patients.

Key words: modified *Da Chengqi* granules; severe acute pancreatitis; immune function; Chinese medicine