



## The clinical significance of ultrasound monitoring acute fluid accumulation in acute pancreatitis

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### Abstract

**AIM:** To evaluate the usefulness of ultrasound monitoring acute fluid accumulation in acute pancreatitis.

**METHODS:** Six hundred and twenty seven patients with acute pancreatitis were undergone ultrasonographic examination. All examinations were performed by the attending doctors. The first scans were performed on the first or second day after admission to

our hospital, if there were acute fluid accumulation in peripancreatic spaces including the lesser sac, pararenal spaces, peritoneal cavity, or even thoracic cavity, then the follow-up scans were routinely performed 3-7 d following the initial scan and this interval was dependent upon the severity of acute pancreatitis, and particularly noticed the changes of pancreas and the fluid mentioned above. Continuous variables were analyzed by *t* test, Discrete variables were analyzed by the  $\chi^2$  test and rank sum test using SPSS,  $P < 0.05$  was considered significant.

**RESULTS:** Acute fluid accumulation was found in 57.5% of 627 patients among them 14.4% evolved into complications and 85.6% resolved spontaneously. The most frequent sites of fluid accumulation are the peritoneal cavity and the left hemithorax, followed by the lesser sac and right hemithorax ( $\chi^2 = 738$ ,  $P < 0.0001$ ); the hospital stay was longer as the quantity of acute fluid accumulation increased ( $P < 0.0001$ ,  $t = 2.2-4.2$ ). There was no fluid accumulation in mild AP and more than 2 sites in severe AP ( $P < 0.0001$ ,  $\chi^2 = 147.8$ ).

**CONCLUSION:** The number of sites as well as the duration of fluid accumulation are proportional to hospital stay and the severity of AP.

**Key words:** Pancreatitis/ultrasonography; Pancreatic juice

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