

Serum C-reactive Protein and White Blood Cell Level as Markers of Successful Percutaneous Drainage of Acute Sterile Peripancreatic Fluid Collection

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Abstract

Background: Percutaneous drainage is not a widely used therapeutic method recently for evacuating peripancreatic sterile fluid collections in patients with severe acute pancreatitis. However, many clinical studies have proved its positive effects.

Aim: We tested the changes in serum laboratory parameters: C-reactive protein (CRP), complement factor 3-4 (C 3-4), tumor necrosis factor- α (TNF- α), amylase, lipase and white blood cell (WBC) count in patients treated by percutaneous drainage.

Patients and Methods: 10 patients with severe acute pancreatitis with peripancreatic fluid collection were monitored. Laboratory parameters and the amount of drained fluid were measured on the 1st, 5th and 10th day. Statistical analysis was performed by using Statistica for Windows (Version 7.0) software. P values less than 0.05 were considered statistically significant.

Results: We found significant positive correlation between the CRP and WBC serum level and volumes of the drained fluid. We used these parameters as markers of successful percutaneous drainage in case of patients with severe acute pancreatitis complicated with sterile peripancreatic fluid. There was no significant change in the levels of C 3-4, tumor necrosis factor- α , amylase and lipase.

Conclusions: Monitoring of serum CRP and WBC levels may be recommended for follow up after percutaneous drainage of peripancreatic fluid.

Abbreviations: CRP: C-reactive Protein TNF α : Tumour Necrosis Factor- α , C3-4: Complement 3-4 WBC: White Blood Cell CT: Computed Tomography

Key words: acute peripancreatic fluid collection, acute phase protein, percutaneous drainage

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