ABSTRACT

ENTERAL NUTRITION IN PATIENTS WITH SEVERE ACUTE PANCREATITIS

Kolosovych Ihor Volodymyrovych
MD, Doctor of Sci (Med), Professor, Head of the Department of Surgery №2
Bogomolets National Medical University, Ukraine

Hanol Ihor Vasylovych
MD, PhD (Med), Associate Professor of the Department of Surgery №2
Bogomolets National Medical University, Ukraine

Objective: Acute pancreatitis is a common disease that accounts for 5-10% of urgent pathology of the abdominal cavity and ranks third (25%) place, yielding to the incidence of acute cholecystitis (28%) and acute appendicitis (26%) [1]. In the general structure of the disease, severe acute pancreatitis occurs in 20% of cases, requires treatment in the intensive care unit, is accompanied by a high risk of complications (up to 50%) and death (40-70%) [2]. According to the literature, even in the early period of severe acute pancreatitis there are changes in microcirculation and damage to the intestinal endothelium, leading to an increase in toxic products, mediators of inflammation and translocation of intestinal microflora into the bloodstream and surrounding tissues [3]. In turn, early use of enteral nutrition in patients with severe acute pancreatitis significantly improves the condition of the intestinal wall and the course of the disease as a whole, reducing the number of complications and mortality.

The aim of the study was to study the timing of the restoration of intestinal absorption as one of the main criteria for the start of enteral nutrition in patients with severe acute pancreatitis and improve the results of comprehensive treatment of patients by preventing its complications.

Material and Methods: The study was based on the results of examination and treatment of 67 patients with severe acute pancreatitis. Depending on the specific method of the chosen treatment tactics, patients were divided into two groups namely a comparison group (standard enteral nutrition) - 33 patients and the main group (standard enteral nutrition with the addition of antiflatulants in the mixture) - 34 patients. To determine the timing of the restoration of intestinal absorption before the start of tube feeding performed a test with disaccharides (lactulose/mannitol), which are not metabolized and a sample with 3% potassium iodide solution.

Results: When comparing the mean levels of lactulose/mannitol in the urine and their standard deviation in the main group and the comparison group at the beginning of treatment (0.042±0.001 and 0.041±0.001, p=0.64 respectively), after 12 hours (0.040±0.002 and 0.041±0.002, p=0.27 respectively), 24 hours (0.039±0.002 and 0.040±0.002, p=0.43 respectively), 48 hours (0.037±0.002 and 0.038±0.002, p=0.76 respectively) and 72 hours (0.036±0.002 and 0.036±0.002, p=0.90 respectively).
and 0.039±0.003, p=0.92 respectively), 36 hours (0.036±0.003 and 0.037±0.004, p=0.9 respectively), 48 hours (0.033±0.004 and 0.033±0.004, p=0.9 respectively) no significant difference was obtained.

In 70.6% of patients in the main group and 69.7% of patients in the comparison group, recovery of intestinal absorption was registered only after 48 hours from the beginning of treatment. The specified time of restoration of intestinal absorption was also confirmed when using a sample with 3% potassium iodide solution.

After 7 and 14 days of enteral nutrition, a significant difference was obtained between total protein, albumin, cholesterol and serum K+ (p<0.05). Also, after 7 days of treatment, there was a significantly lower incidence of intestinal complications in patients of the main group by 21.5% (χ2=4.88, 95% CI 2.3-39.5, p=0.03).

The analysis and comparison of the frequency of local complications severe acute pancreatitis was also performed in the main group and the comparison group (41.2% and 48.9% respectively) (χ2 = 0.12, 95% CI 15.37-29.69, p=0.5), duration of multiorgan failure (10.5±1.9 [8-16] days and 11.5±1.8 [6-15] days respectively (p=0.04)), length of hospital stay (50.7 ± 28.8 [23-124] days and 54.9 ± 32.6 [20-119] days respectively (p=0.5) and fatalities (11.8% and 12.1%, respectively (χ2=0.11, 95% CI 16.25-17.07, p=0.97).

**Conclusion:** Restoration of intestinal absorption occurs in an average of 48 hours from the beginning of complex conservative therapy in patients with severe acute pancreatitis. The use of antiflatulents in the composition for enteral nutrition allowed to improve the laboratory parameters of blood serum, reduce the incidence of intestinal complications by 7 days by 21.5% (χ2=4.88, 95% CI 2.3-39.5, p=0.03) and the duration of multiorgan failure from 11.5±1.8 days to 10.5±1.9 days respectively (p=0.04).

**References:**

