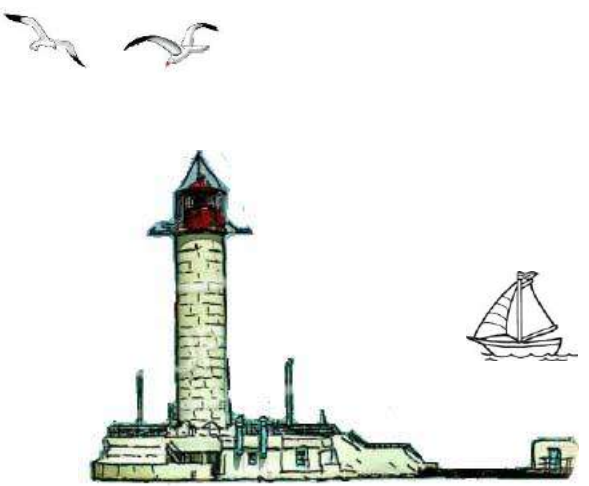
МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ДП УКРАЇНСЬКИЙ НДІ МЕДИЦИНИ ТРАНСПОРТУ
МОЗ УКРАЇНИ
ОДЕСЬКИЙ НАЦІОНАЛЬНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ
НАУКОВЕ ТОВАРИСТВО ПАТОФІЗІОЛОГІВ УКРАЇНИ
УКРАЇНСЬКА АСОЦІАЦІЯ МЕДИЧНОЇ НАУКИ

БЮЛЕТЕНЬ XXIII ЧИТАНЬ ІМ. В. В. ПІДВИСОЦЬКОГО

16 – 17 травня 2024 року



ОДЕСА 2024

UDK 12.464:616.36-004-036-07

CHANGES IN RENAL EXCRETORY FUNCTION TO SALT LOAD IN PATIENTS WITH LIVER CIRRHOSIS

ЗМІНИ ЕКСКРЕТОРНОЇ ФУНКЦІЇ НИРОК НА СОЛЬОВЕ НАВАНТАЖЕННЯ У ПАЦІЄНТІВ З ЦИРОЗОМ ПЕЧІНКИ

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Introduction. Edema-ascitic syndrome is one of the clinical manifestations of decompensation of liver cirrhosis (LC) as a result of dysregulation of water-electrolyte balance. Renal dysfunction plays a significant role in the development of these disorders.

Purpose: to study renal function under conditions of spontaneous diuresis during salt loading in patients with cirrhosis depending on the stage of the disease.

Material and methods. 13 patients with low-active subcompensated and 15 patients with decompensated cirrhosis of toxic etiology aged from 43 to 56 years and 20 practically healthy individuals were examined. The functional state of the kidneys was assessed using the clearance method under conditions of 12-hour spontaneous nocturnal and 2-hour induced diuresis (using a 0.5% sodium chloride solution at a rate of 5 ml/kg body weight).

Results. Impaired renal function during spontaneous diuresis was manifested by a slight increase in blood creatinine concentration ($p<0.05$) with practically unchanged glomerular filtration (GF), a tendency to decrease the excretion of sodium ions due to a decrease in GF in both groups of patients. A decrease in the adaptive reactions of the kidneys to the introduction of saline solution during salt loading was revealed. There was a decrease in both total and relative diuresis, which reached significant values in decompensated cirrhosis ($p<0.05$). An increase in the concentration of plasma creatinine ($p<0.05$) was found with a decrease in GF by almost 3 times ($p<0.05$) and to a greater extent with decompensation of the process. Changes in the ion-regulating function of the kidneys were characterized by a decrease in sodium excretion in the urine during decompensation of the process ($p <0.05$) with a tendency to increase sodium concentration in plasma in both

groups. Changes in the sodium-regulating function of the kidneys occurred due to a decrease in GF. Sodium clearance significantly decreased in patients with decompensated cirrhosis.

Conclusions. The disturbances in the water-electrolyte balance in patients with cirrhosis may be due to a decrease in GF with impaired excretion of sodium and water ions. These changes clearly manifest themselves against the background of salt load as the pathological process in the liver decompensates. They are functional in nature, as they occur in response to the administration of small volumes of fluid in a short period of time.

Key words: renal excretory function, liver cirrhosis, salt load.

Ключові слова: екскреторна функція нирок, цироз печінки, сольове навантаження.

UDK 616.61-008.6:616-018.74:616.36-004

THE RELATIONSHIP BETWEEN RENAL EXCRETORY FUNCTION AND THE ACTIVITY OF ENDOTHELIAL RELAXING FACTOR IN PATIENTS WITH LIVER CIRRHOSIS

ВЗАЄМОЗВ'ЯЗОК МІЖ ЕКСКРЕТОРНОЮ ФУНКЦІЄЮ НИРОК ТА АКТИВНІСТЮ ЕНДОТЕЛІАЛЬНОГО РЕЛАКСУЮЧОГО ФАКТОРУ У ПАЦІЄНТІВ З ЦИРОЗОМ ПЕЧІНКИ

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Introduction. An increase in the synthesis of the endothelial relaxing factor - nitrogen monoxide (NO) - plays a role in the development of a number of vascular and renal complications in liver cirrhosis (LC).

Purpose: to study changes in renal excretory function, NO activity and establish a possible relationship between these indicators in patients with decompensated LC.

Material and methods. We examined 19 patients with low-active decompensated cirrhosis of toxic origin aged from 32 to 56 years and 20