

PATIENTS WITH BURN INJURY AND LIVER FUNCTION

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ABSTRACT

The article discusses the results of studying the violation of the functional state of the liver in patients with extensive burn injuries. The liver function in these patients' remains impaired even several months after the healing of burn wounds. We study hypoproteinemia and dysproteinemia resulting from burn injury, a decrease in the antitoxic function of the liver for a long time, manifestations of cytolytic and cholestatic syndromes, a decrease in the content of total lipids, cholesterol and beta-lipoproteins.

Keywords. Liver function, liver function tests, burn convalescents, restoration of hepatocyte function.

INTRODUCTION:

The urgency of the problem lies in the fact that the liver is the main target organ for extensive burn injuries. The study of literature data on this issue indicates that liver failure in acute burn toxemia is characterized by a decrease in antitoxic, protein-forming, excretory, pigment functions.

Structural and functional liver failure as a manifestation of early burn hepatitis is the direct cause of the death of some patients. In this case, the direct effect on the liver of excessive afferent impulses, disturbances of hepatic-portal blood flow, oxygen deficiency, toxic effects of absorption products from the wound, as well as narcotic substances are important.

The manifestations of cytolytic and cholestatic syndromes are observed already in the first day of the disease. In order to correct these conditions, a clear infusion intensive care regimen is required. In case of burn disease, it is difficult to achieve restoration of the circulating blood volume only by infusion of plasma-substituting solutions. We need drugs that stabilize metabolic disorders and lower the concentration of pro-inflammatory cytokines. Complex intensive therapy for burns should also include the correction of cell energy production without enhancing oxygen transport.

The aim of this study was to study liver function in burn convalescents.

MATERIALS AND METHODS

We studied the violation of the functional state of the liver in 62 (30 men, 32 women) burn convalescents. The examination was carried out on the basis of the burn department of the branch of the Republican Center for Emergency Medical Aid in the period from 3 to 18 months. Investigated: total protein and its fractions in the blood serum, blood bilirubin, sediment samples, the Quik-Pytel test, the activity of aminotransferases (AST and ALT), sorbitol dehydrogenase (SDH), blood sugar, total lipids, cholesterol and betalipoproteins.

Depending on the severity of the injury, the patients were divided into two groups: in the first (32 people) - deep burns accounted for up to 20% of the body surface, in the second (30 people) - the burn surface exceeded 20% of the body surface.

RESULTS AND BRIEF DISCUSSION

Hypoproteinemia was revealed, respectively, in the groups of patients 63 and 61 g / l at a norm of 81.2 g / l, hypoalbuminemia -47.5% and 43.4% at a norm of 62.7% and hyperglobulinemia - 52.5 and 65.6% at a norm. 37.3%. / . Hypoproteinemia and dysproteinemia that arose as a result of burn injury returned to normal only after 9-11 months, and in some cases even later, after the healing of burn wounds. Deviations from the norm of the thymol test were found in patients of the first group in 16 cases, and in patients of the second - in 21 cases.

The serum bilirubin content in patients of both groups was within the normal range, with the exception of a few people with late hepatitis. The Quick - Pytel test showed that a burn injury for a long time reduces the antitoxic function of the liver: in patients of the first group, it was 66.2%, and in the second, 60.3%, while the norm was 75.1%. In a number of cases, a decrease in the activity of SDH and an increase in the activity of transaminases in the blood serum were found, however, these changes turned out to be inconsistent and cannot serve as a convincing criterion in assessing the functional state of the liver.

There was a 20-22% decrease in the content of total lipids, cholesterol and bettalipoproteins. It should be noted that the indicators of liver function tests in the long term after a burn injury turned out to be better in patients who underwent early necrectomy and autodermoplasty.

An analysis of clinical observations showed that the success of maintenance therapy in hepatic failure largely depends on the amount of preventive and therapeutic benefits: correction of the main disorders in burn shock at the prehospital stage. It is achieved by using agents that eliminate pain and pathological afferent impulses, normalize organ and peripheral hemodynamics, correct metabolic acidosis, hyponatremia, and have an antihistamine effect, prevent acute renal failure and intoxication of the body.

The achievement of the goal creates conditions for the elimination of oxygen starvation of hepatic cells and their structural changes; adequate, successive fight against burn shock in the hospital, providing prevention and treatment of pathological changes; active surgical tactics in order to restore the skin in the early stages; rational anesthesia of multiple dressings with the exclusion of drugs that have a toxic effect on the parenchymal organs.

Treatment benefits:

- Restoration of the function of hepatic cells. Achieved by targeted medication and dietary treatment.
- Reduction of the concentration of ammonia in the blood by the administration of arginine hydrochloride, choline chloride, glutamic acid, gastric lavage, stimulation of intestinal motility, cleansing enemas, temporary abstinence from the introduction of protein hydrolyzers.
- Reduction of oxygen starvation of tissues and organs by necrotomy of a burn scab, oxygen therapy, active tactics for the prevention and treatment of atelectasis, pneumonia, anemia, the use of cardiogenic drugs.
- Maintenance of optimal homeostasis. It is achieved by correcting circulatory disorders, water-electrolyte balance and acid base balance.
- Prevention and treatment of renal failure.

Our findings indicate that liver function in persons who have undergone severe burn injury remains impaired even several months after the healing of burn wounds. This fact must be taken into account in the plan for medical rehabilitation and, if necessary, for such patients to carry out operations for contractures.

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