

LIVER INJURY

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The marked tendency of increasing of road-accidents and industrial injuries led to extension of liver injuries, according to literature - 12,1 to 32,4%, in cases of abdominal and thoracoabdominal trauma.

Improved knowledge of medicine, earlier and more competent resuscitation and anaesthesia, improved intensive care of the severely injured patient have contributed to the remarkable decline in the mortality associated with liver trauma - today - 5% for penetrating injury and 10% for blunt one (1,2,3,5). In addition, accurate assessment of the extent of liver trauma has allowed for more appropriate surgical approach. Liver can be injured in cases of blunt and penetrating abdominal and thoracoabdominal trauma and for our country blunt injuries prevail over penetrating - 81-90%. Liver is the second most commonly injured organ, following blunt trauma (in our series -15,92%) after spleen injury. There are lots of classifications of liver injuries: according to the mechanism, clinical features etc. One of the most convenient and suitable for everyday practice is the classification of W. Schweizer, L. H. Blumgart, A. Huber (Univ. of Bern) - five grades according to the severity of the injury (2).

For the time period 1985-1991 (VI m.) 157 patients with abdominal and thoracoabdominal trauma were hospitalized in our Clinic - 114 males (79,7%) and 43 females (27,3%), at the age from 16 to 73 years. Of them, 29 were with penetrating injury (18,47%) and 128 - with blunt one (81,53%). 87 (55,4%) patients were with abdominal trauma, 47 ones (29,93%) -with thoracoabdominal, and 23 (14,65%) - with multiplex concomitant injuries.

Liver injury was found in 25 patients (15,92%); males -17 (68%), females - 8 (32%). Up to the 2nd hour from the onset of the trauma were hospitalized 3 patients, up to 6th hour - 8 patients, up to 12th hour - 13 patients and up to 24th hour one patient. According to the severity of liver injury the distribution of our patients was: I gr. - 3 pts, II gr. - 8 pts, III gr. - 10 pts, IV gr. -3 pts and V gr. - 1 patient. The most important signs in the initial clinical examination were: acute haemorrhage (in severe cases up to shock) - found in 12 of our patients; tenderness in the right upper abdomen and lower thorax, and sometimes shoulder pain, ranging from weak to violent pain. It is more probably a sign of the trauma itself, rather than a pathognomonic sign of liver injury; nau

sea, vomiting and flatulence - late symptoms. Blood pressure at the beginning can be unaffected, but in the next hours, clinical examination reveals a rising pulse and falling blood pressure, i. e. change of shock index, though in many cases, frank signs of shock may be delayed for some hours. Since the mortality increases with delay in diagnosis and treatment, any investigations must be undertaken urgently. With very high diagnostic accuracy are laparoscopy (performed in 14 cases) and abdominocentesis (in 7 ones). According to circumstances, but only in patients after resuscitation, we can use non-invasive diagnostic methods - ultrasonography and C.T. In cases of questionable and problematic patients, marked hypovolemia, very poor condition of patients we can make diagnostic explorative laparotomy. The choice of operative management depends on the severity and extent of liver injury.

We've performed the following operative procedures: suture - 19; suture + packing -3; right hemihepatectomy - 1; suture of liver and *V. portae* -1; partial resection - 1. Bleeding from the liver can be controlled by packing and by Pringle's manoeuvre - in cases of III and IV gr. liver injury.

Postoperative mortality in our patients is 12,5% (3 patients): two of them with severe concomitant injuries and one patient with ruptura-conquasatio of liver and lesion of *v. v. hepaticae*. In 4 patients we have done intraoperative autohemotransfusion - the volume of reinfused blood ranged from 250 to 750 ml.

In conclusion, in order to optimize the results from the management of liver injuries we attach great importance to:

- early and accurate diagnosis of liver injury with usage of abdominocentesis and Laparoscopi;
- early operative management and adequate resuscitation of trauma patients;
- application of intraoperative autohemotransfusion;
- early and precise diagnosis and treatment of the complications from liver injury.

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