

# THE CAPACITY OF HEPATIC HEMODYNAMICS IN THE NUTRITIONAL ASSURANCE OF HEPATOCYTES IN THE ELDERLY

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**Introduction.** Blood supply to hepatocytes is severely compromised as a result of the difficult exchange of substances between hepatocytes and plasma, by the continuous deposition of collagen in the space of Disse, accompanied by the loss of fenestrations in the sinusoidal endothelial cells. The net result– fibrotic, nodular liver. The new vessels in the septa connect the vessels in the portal region (hepatic arteries and portal veins) and the terminal hepatic veins, altering blood flow. The purpose of the study consists in evaluation of indices of hepatic hemodynamic capacities in priority nutrient vessels in elderly patients with liver pathology.

**Material and methods.** Hemodynamic parameters were studied by Doppler quantification in 32 patients: 18 men and 14 women with an average age of  $69\pm 0,21$  years. The descriptive statistical test was applied.

**Results.** The significant specificity and sensibility was demonstrated by changes in blood flow: decreased diastolic velocity (38%), increased volume velocity (57%) of the blood flow. The resistance index in the hepatic artery increased by 1,4%, the pulsatility index - by 6,3%, and the spatial velocity of the blood flow in the portal vein - by 7,7%. The spacial velocity oscillated between  $990\pm 69$  ml/min and  $1188\pm 34$  ml/min (approximately 20%).

**Conclusions.** 1. The arterial vascularization's sensitization implies heightened intraheptic vascular resistance amidst stagnant blood flow within the portal system in geriatric patients.

**Keywords:** Space of Disse, Doppler quantification, diastolic velocity, volume velocity.