

ELASTOGRAPHIC ASSESSMENT OF CAUDATE LOBE COMPARED WITH THE OTHER LIVER LOBES IN HEALTHY AND LIVER DISEASES CHILDREN

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The caudate lobe is a "separate" structure of the liver, receiving blood flow from both right and left-sided vascular branches; it represents the segment 1; it is less echogenic than other segments.

The aim of this paper was the assessment of liver tissue in caudate lobe versus the other lobes, in healthy children compared to children with liver diseases.

Material and methods: It was a prospective study conducted in the Pediatric Clinic Tg.-Mures, Romania, between September 2010 - February 2011, including 103 hospitalized children: 71 patients with liver damage (cancer, obesity, liver diseases) and 32 healthy children. We evaluated Shear Wave Velocity (SWV) "elasticity", establishing statistical correlations between values for caudate lobe versus segment VIII.

Results: The SWV values in group of healthy children were $1,259 \pm 0,30$ m/s for 8th segment (the right liver lobe), and $1,083 \pm 0,289$ m/s in the 1st segment (the caudate lobe), statistically significant ($p=0,0216$).

In the group of children with liver diseases, the SWV global values were bigger than to control group, $1,35 \pm 0,41$ m/s versus $1,30 \pm 0,22$ m/s, without being statistically significant ($p > 0,05$), while individually taking the SWV values for the 8th and 1st segment, statistically differences were obtained between control group and that with hepatopathies for the 1st segment ($p < 0,05$).

Conclusions: In normal conditions in 1st segment the SWV values are significantly smaller than in the 8th segment, which is explained due to its own caval anastomosis of segment 1; SWV is higher in children with liver-diseases, which shows that it is first affected in hepatic fibrosis.