

INFLUENCE OF NEBULISED SALBUTAMOL ON HEPATIC VENOUS FLOW IN INFANTS WITH ACUTE BRONCHIOLITIS

T.A. Kanellopoulos¹, S.D. Giarmenitis², M. Iliopoulou¹, C. Kalogeropoulou²,
M. Anthrakopoulos¹, D.A. Papanastasiou¹

¹*Department of Pediatrics, ²Department of Radiology, Patras University Hospital, Patras, Greece*
dimapapa@med.upatras.gr

INTRODUCTION: Acute viral bronchiolitis is a common disease in infants. Clinical signs and pulse oximetry allow pediatrician to evaluate response to treatment. **PURPOSE:** Estimation of hepatic venous flow by Doppler ultrasonography before and after inspiration of nebulised salbutamol (NS) in infants with acute bronchiolitis and correlation to the clinical signs and the oxygen saturation (SaO₂). **PATIENTS AND METHODS:** Nineteen previously healthy infants, aged 1-18 months, admitted for their first episode of acute bronchiolitis, were included in the study. We determined in each patient, before and 15 min after NS treatment: (a) a clinical score of respiratory distress, (b) the SaO₂, (c) the peak flow velocities at the middle hepatic and right renal vein and (d) the transit time at the middle hepatic vein after bolus intravenous injection of ultrasound contrast agent. **RESULTS:** The clinical score did not change after NS treatment, while SaO₂ increased statistically significantly ($p=0.01$). In all patients after treatment, there was a significant increase of the peak flow velocity and of the transit time at the middle hepatic vein ($p=0.0002$ and $p<0.0001$, respectively), but there was no effect on the peak flow velocity at the right renal vein. **CONCLUSIONS:** After salbutamol treatment, the peak flow velocity and the transit time at the middle hepatic vein increased significantly, but not the peak flow velocity at the right renal vein. These findings are possibly due to a dilating effect of salbutamol on the pulmonary vasculature, which furthermore leads to a significant increase of SaO₂, without improvement of clinical signs.

