

عنوان مقاله:

The Importance of Electrocardiography in Pediatric Patients with Pulmonary Arterial Hypertension in Follow-up

محل انتشار:

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خلاصه مقاله:

Background: Right Ventricular (RV) hypertrophy is an adaptive response to chronic RV pressure overload in patients with pulmonary hypertension. We investigated the relationships between RV hypertrophy indicators, including electrocardiography, the percentage oxygen saturation (SaO₂%), body mass index (BMI), and blood uric acid levels in patients with a biventricular structure followed up for Pulmonary Arterial Hypertension (PAH). Materials and Methods: This retrospective study included 33 patients with confirmed systemic PAH, according to the catheterization and a negative vascular reactivity test result. Patients with single-ventricle physiology and Down's syndrome who had undergone surgery were excluded. The data of blood chemistry, hemogram, ECG, and SaO₂% were collected, thus, the BMI was calculated. The patients were categorized according to SaO₂ values (<90% [n=14] vs. > 90% [n=19]), BMI (18.5 [n=17] kg/m²), PAH status (primary [n=13] vs. secondary [n=20]), and treatment regime (combination therapy [n=16] vs. monotherapy [n=17]), and the data were compared among the groups. Results: Patients with SaO₂ values of <90% and > 90% differed only in terms of blood uric acid level, which was significantly higher in the patients with SaO₂<90%. The V1–V2 R-waves indicating right ventricular hypertrophy were significantly higher in patients with a BMI Conclusion: Low BMI, SaO₂ <90%, elevated uric acid levels, and an elevated R-wave in V1 or V2 were associated with poor functional capacity. In particular, the D1 S-wave was significantly higher in patients who received combination therapy, with a height > 9 mm indicating impaired capacity. These measured markers can be used to follow-up patients with PAH.

کلمات کلیدی:

Children, Pulmonary arterial hypertension, S-wave

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