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Cardiac disorders in the treatment of infantile hemangiomas with propranolol

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Objective. Investigate the effect of propranolol on the cardiovascular system in the treatment of infantile hemangiomas.
Methods. A total of 132 children who started treatment with propranolol at the age of 1 month to 4 years with infantile hemangiomas of various localization were examined. The children underwent a complete cardiac examination, including a clinical examination, ECG, echocardiogram, Holter monitoring. The survey was conducted before the appointment of therapy with propranolol, every 3 months during therapy and after its cancellation.
Results. According to the echocardiogram, 6% of children initially diagnosed heart disease, (CHD, syndrome of noncompact myocardium of the left ventricle, PH). During the treatment, no child had a decrease in myocardial contractility. During treatment with auscultatory and according to ECG data, 1% of children had bradycardia. However, the Holter monitoring showed that all children after 3 months of treatment showed a decrease in heart rate during wakefulness by 9% of the norm (Me 130 ± 9.54). In 6% of children, during the treatment, rhythm pauses were identified, significantly exceeding the age norm (deviation rate 102-161%), which was an indication for changing the dose of the drug in the direction of its reduction. In one child, syncopal states were noted against the background of a pause in rhythm, which required discontinuation of therapy with propranolol. During treatment, AV block 1 degree was detected in 4% of children according to ECG data; according to Holter monitoring data, 18% of children showed AV block I – II degree. In 7% of children, AV blockade remained after discontinuation of propranolol therapy. Hypotension during treatment occurred in 11% of children.
Conclusion. Clinical examination, ECG, echocardiogram, and Holter monitoring have made it possible to establish undesirable cardiovascular effects in 18% of children during therapy with propranolol. Holter monitoring before prescribing, during treatment and after termination allows to identify undesirable effects of therapy (bradycardia, cardiac rhythm pauses, AV-block II-III degrees) in time and adjust the dose of propranolol.