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Integrated model for the risk assessment of the unfavourable course of binodal pathology in children

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Aim: This study is aimed to look for the risk factors of an adverse course of binodal pathology and the creation of a comprehensive model of an adverse course of the disease.
Methods: We have enrolled 177 consecutive patients with binodal pathology, 146 (82,5%) male, 31 (17,5%) female. Inclusion criteria: combined sinus node dysfunction and atrioventricular (AV) conduction disturbance, duration of observation of at least 1 year, at least 2 comprehensive examinations, and the presence of disease dynamics.
All children had carried out examination of the heart at least 2 times: ECG, Holter monitoring (HM), transesophageal electrophysiologic study (TEEPS), and echocardiographic examination, The clinical results obtained during the work were processed using the STATISTICA for Windows software (version 10).
Results: In the analysis of complaints, clinical picture and data of electrocardiographic and electrophysiological parameters, factors that have influenced the course of the binodal pathology were established. Risk factors were: male gender, the age of manifestation of the disease over 14.5 years, the minimum heart rate is less than 52 beats per minute (before the medication), the value of SNRT is more than 1510 ms (before the test with atropine), the minimum heart rate after the administration of atropine is less than 96 bpm.
The total risk score is calculated as the sum of the values of these indicators (5 risk factors) and can take values from 0 to 5 points. Three levels of total risk score are singled out: 0 points - low probability of negative dynamics; 1-3 points - an insignificant probability of negative dynamics; 4-5 points - significant risk of negative dynamics.
Conclusion: We obtained statistically significant ($p < 0.01$) differences in the frequencies of the negative dynamics of the course of the binodal pathology at different levels of the total risk score.