

3. ARRHYTHMIA IN CHILDREN WITH TETRALOGY OF FALLOT

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Introduction. Tetralogy of Fallot (TF) is the most common cyanogenic congenital heart disease, constituting 7-10% of all heart abnormalities. Early radical correction of the abnormality in children has significantly increased the survival and quality of life of patients. Extensive studies have shown a reduction in early and late post-surgical arrhythmias. At the same time, repaired TF may be associated with significant tachyarrhythmia (30%) or heart block (8-10%). Ventricular tachycardia in TF is rare, but with the risk of sudden death at any age.

Aim of study. Estimation of the particularities and impact of arrhythmias associated with TF in children.

Methods and materials. The retrospective analytical study included all patients with a clinical diagnosis of TF, hospitalized consecutively in the pediatric cardiology service of the Mother and Child Institute for a period of 3 years (2019-2021). The files of children of both sexes, aged between 1 month and 18 years, were analyzed. The diagnosis was established based on anamnestic, clinical and imaging data.

Results. The general group included 40 children diagnosed with TF (mean age 3.57 ± 2.14 years), with a predominance of 28 boys (70%). The general group of patients was divided into 2 study groups: group I-12 patients with TF and arrhythmias (mean age 5.8 years ± 3.4 years) and group II-28 patients with TF without arrhythmias (mean age 2.24 ± 1 , 18 years). Each of the groups was analyzed according to surgical treatment (palliative and/or radical correction), respectively being divided into 2 subgroups: subgroup A - repaired and subgroup B - unrepaired. The analysis of the subgroup A (repaired TF and arrhythmias) showed that the children, who underwent radical correction (66.7%), associated different late arrhythmias (time after surgery 4.4 years): bradyarrhythmias, including right bundle branch block (RBBB) in 8 (50%), and 1 case of AV block grade I. At the same time, 3 children (18.75%) were identified with major and combined arrhythmias, who benefited the treatment, respectively: 1- frequent ventricular extrasystole

Conclusion. Heart block is present in about half of children with repaired TF, without clinical impact at the moment. Diverse ventricular arrhythmias are rare, but require antiarrhythmic treatment to prevent sudden cardiac death.