

Category : **Cardiovascular: Other**

**A269 - Implementation of serum soluble st2 in pediatric cardiology practice**

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**Introduction:**

There are still lack of usefulness biomarkers of heart failure in pediatric cardiology practice. Soluble ST2 is one of the most promising laboratory marker of heart failure. It's already widely used for diagnostic and prognostic goals in adults[1], but it's not much investigated in children[2]. We suppose serum soluble ST2 is able to become a new cardiac biomarker of cardiac muscle injury, remodeling and fibrosis, and heart failure outcomes stratification in pediatric population.

**Methods:**

Research was performed on the base of Pediatric Intensive Care Unit and Cardiology department of National Medical Research Center for Children's Health, Moscow. Sera from 44 patients, 20 female and 24 male, in age from 8 months up to 17 years and 11 months (median age 7 years and 2 months old ) with confirmed dilated and hypertrophic cardiomyopathy were taken. For all patients levels of soluble ST2, pro-BNP were determined and ECHO was performed for ejection fraction (EF) assessing.

**Results:**

Both pro-BNP and ST2 showed direct link with severity class of Chronic Heart Failure assessed by NYHA classification. However, moderate negative correlation ( $r=-0,61$ ,  $p$  value = 0,00019) between ST2 and EF was proofed by Pearson's correlation test, meanwhile there was no strong correlation between pro-BNP plasma level and ECHO results.

**Conclusion:**

Significantly higher plasma level of serum soluble ST2 were found in patients with reduced EF (<55%). In pediatric patients with DCMP and HCMP ST2 plasma level seems could be used as cardiac function marker. For assessing diagnostic value of ST2 in children with cardiac pathology as a marker of patient response to therapy, future investigations should be done.

**References:**

1. Villacorta H. et al. Arq Bras Cardio. 106(2): 145–152, 2016
2. Meeusen JW. et al. Clin.Biochem. 48(18): 1337-1340, 2015.