machine using reagents from Hema (Russia). Statistical processing of the data was performed on a personal computer using the software package 'Statistica 6'.

Results and discussion Determining plasma concentration of endothelin helps to establish the diagnosis of heart failure in the early stages of the disease. The study of endothelin content depending on the form of cardiomyopathy revealed that the average content of endothelin was unreliable higher in children with hypertrophic cardiomyopathy and corresponded to the upper limit of normal (1.0 ± 0.2 mmol/l, $p > 0.05$), compared with the rate of children with dilated cardiomyopathy ($0, 86 \pm 0.1$ mmol/l, $p > 0.05$). However, according to the results of our studies, an increase in the level of endothelin as the progression of the disease was found. Thus, in patients with a disease duration of 5 years, the level of endothelin was 1.3 mmol/l, in patients with a disease duration of 9 years, this figure was 1.7 mmol/l, and in a patient with a disease duration of 15 years - 1.98 mmol/l, which is 2 times the norm. A correlation analysis between the prescription of CMP, the severity of chronic heart failure and the level of endothelin revealed a strong direct correlation ($r = + 0.97$), which indicates the predictive value of endothelin. From this it follows that determining the plasma concentration of endothelin helps to establish the diagnosis heart failure in the early stages of the disease.

Conclusion As the disease progresses, an increase in the level of endothelin is a reliable prognostic criterion for the severity of chronic heart failure in children with cardiomyopathy.

P58 THE IMPORTANCE OF MEDICAL AND BIOLOGICAL FACTORS IN THE DEVELOPMENT OF CARDIOMYOPATHY IN CHILDREN

¹Nilufar Akhmedova*, ^{2,1}Dilorom Akhmedova, ²Flora Inoyatova. ¹Tashkent Pediatric Medical Institute, Tashkent, Uzbekistan; ²Republican Specialized Scientific and Practical Medical Center of Pediatrics, Tashkent, Uzbekistan

10.1136/archdischild-2019-epa.413

The health and well-being of people today are influenced by many factors that are determining. Studies show that the main risk factors for cardiovascular diseases, often occur in childhood, are relatively stable, since their presence is confirmed by repeated studies conducted in an adult state.

The purpose To evaluate the role of medical-biological factors in the development of cardiomyopathy in children

Materials and methods The study involved 86 patients with diagnoses of hypertrophic, dilatation and restrictive cardiomyopathy, who were hospitalized in the cardio-rheumatology department of the Republican Specialized Scientific and Practical Medical Center of Pediatrics, the Republican Children's Multipurpose Medical Center of the Republic of Karakalpastan. The diagnosis was made on the basis of complaints, anamnesis data (obstetric history of the mother, history of the child's life and illness, hereditary predisposition, past diseases, nature of the course and duration of the disease), clinical and functional (ECG, EchoCG), laboratory examination methods.

Results The study of biomedical factors contributing to the development of cardiomyopathy in children has shown that the disease is sex-related and is more common in boys (60%). In 10% of patients with CMP, the age of mothers was over

35 years old at the time of birth of this child. Nearly related marriages were registered in 25% of cases, hereditary burden in 7.5% of patients. Studies have shown that one determinant that has a significant impact on the development of the ILC is also the burden of obstetric history of mothers. Thus, the study of obstetric history of mothers indicates the birth of premature babies, the presence of stillbirths, miscarriages in early pregnancy. This pregnancy proceeded against the background of anemia and pre-eclampsia of the first or second half of pregnancy. Most of the mothers suffered from extragenital diseases, among which were more frequent kidney and heart diseases (chronic pyelonephritis and carditis), allergic reactions. The number of mothers who had ARI during pregnancy was 85%. The debut of the disease was associated with sudden cardiac arrest in 3.3% of the child; syncopal state during physical exertion in 6.67% of children and with postponed carditis in 13.3% of children.

Thus, among the biomedical factors that influence the development of cardiomyopathy the most closely related marriage, hereditary predisposition, obstetric history and unfavorable pregnancy, the presence of extragenital diseases in the mother, the age of the mother over 35, and childhood diseases of viral etiology are most significant.

P59 RELATIONSHIP BETWEEN ORAL HEALTH AND HYPERTENSION IN ADOLESCENTS

Larisa Kolesnikova, Anna Pogodina, Olga Berdina, Olga Valyavskaya, Lilia Zurbanova, Lyubov Rychkova*. Scientific Centre for Family Health and Human Reproduction Problems, Irkutsk, Russian Federation

10.1136/archdischild-2019-epa.414

Aim to characterize oral health in adolescents with hypertension and evaluate presence of significant associations between hypertension and main dental diseases.

Methods A case-control study was conducted. A total of 130 subjects aged 10 -17 were included in the study. The group of 'cases' included 65 adolescents with hypertension, verified by ABPM, and control group included the same number of adolescents with normal blood pressure levels, compatible by the sex and age. All adolescents underwent anthropometric measurements with BMI calculation, dental examination (caries intensity index, gingivitis index, complex dental plaque index, oral hygiene index). Binary logistic regression, adjusted for BMI z-scores and oral hygiene indexes, was used to assess the relationship between hypertension and presence and severity of oral diseases in adolescents.

Results Frequency of dental caries and periodontitis was higher in the group of adolescents with hypertension in comparison with the controls (76.9% vs. 49.2% for caries, and 40% vs. 9.2% for periodontitis, $p=0.001$ for both). Signs of moderate to severe gingivitis were noticed in 18.5% adolescents with hypertension and only in 3.1% adolescents from the control group ($p=0.009$). Poor oral hygiene was detected in 43.1% adolescents with hypertension and in 21.5% adolescents from the control group ($p=0.002$). Presence of hypertension was significantly associated with caries and periodontitis, but not with gingivitis in adjusted regression models (OR 3 [1.3 - 7.1], $p=0.012$ for caries, and OR 3.9 [1.4 - 10.5], $p=0.007$ for periodontitis). Moreover, hypertension was associated with more severe damage of periodontium (OR 3 [1.6 - 5.6], $p=0.001$).