P-82

Serum Homocysteine, Asymmetrical Dimethylarjinine And Nitric Oxide Levels In Children With Pulmonary Arterial Hypertension

Sanli C. (1), Oguz D. (2), Olguntürk R. (2), Tunaoğlu F.S. (2), Kula S. (2), Paşaoğlu H. (3), Gülbahar Ö. (3), Çevik A. (2)
Department of Pediatric Cardiology, Kırıkkale University Medical School, Kırıkkale, Turkey (1)
Department of Pediatric Cardiology, Gazi University Medical School, Ankara, Turkey (2)
Department of Biochemistry, Gazi University Medical School, Ankara, Turkey (3)

Introduction: This study has been designed to determine homocysteine, asymmetric dimethyl arginine (ADMA) and nitric oxide (NO) levels in patients with congenital heart defects (CHD) having pulmonary arterial hypertension (PAH) and healthy controls and to define the relationship of these markers with echocardiographic and catheter angiographic findings.
Materials and Methods: A total of 70 cases including 30 patients with PAH, 20 patients with CHD having left to right shunt without PAH and 20 healthy controls were included in the study. Homocysteine, ADMA and NO levels were determined in plasma samples by ELISA.
Results: Homocysyteine and ADMA levels were higher in PAH group when compared to others whereas there was no difference in between the groups regarding NO levels. The cyanotic patients in PAH group had significantly elevated homocysteine levels when compared to acyanotics. No correlation was shown in between echocardiographic and hemodynamic parameters and homocysteine, ADMA and NO levels of patients with PAH.
Conclusion: We concluded that in the patient group with PAH, increased homocysteine and ADMA levels could have been contributed to development of PAH in association with other factors or might have increased as a result of PAH proving that in either case these parameters can be used as biomarkers of PAH.
Key words: Pulmonary arterial hypertension, homocysteine, ADMA, NO.