Pediatric Rheumatology

Poster presentation

Subclinical aterosclerosis and Kawasaki Disease (KD): results from an e- tracking study of arterial stiffness in a Sicilian population

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from 15th Paediatric Rheumatology European Society (PreS) Congress
London, UK. 14–17 September 2008

Published: 15 September 2008

Pediatric Rheumatology 2008, **6**(Suppl 1):P257 doi:10.1186/1546-0096-6-S1-P257

This abstract is available from: http://www.ped-rheum.com/content/6/S1/P257

Background

Patients with Kawasaki Disease (KD) may have an increased risk for early atherosclerosis. Arterial stiffness (AS) has recently recognized as a predictor of atherosclerosis. AIM of this study was to evaluate AS in a populations of KD patients (pts). The study was performed by means of E-tracking, a system measuring changes in arterial diameter synchronized with the ECG signal and permitting evaluation of pulse wave propagation velocity in a point of the vascular system.

Methods

Twenty children who had suffered from KD and 20-age- and sex-matched healthy controls were enrolled. In each subject, E-tracking was performed in both common carortid arteries. The following parameters were calculated: 1) Stiffness index, 2) Pulse wave velocity, 3) Elastic modulus, and arterial compliance. In addition, intima-media thickness (IMT) was measured.

Results

Kawasaki patients' age at examination was 5 years; the mean time interval between the disease onset and the testing time was 3.5 years. Coronary involvement was recognized in 6 pts. All KD pts show a significant AS compromise as expressed by increase in stiffness index, pulse wave velocity and elastic modulus, as well as by arterial compliance decrease. IMT was normal.

Conclusion

Pts with KD show a clear arterial stiffening. This report is the first one describing changes in AS revealed by E-tracking in pts with KD; we suggest that E-tracking study could be more sensitive than IMT in revealing arterial damage in KD

References

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