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Effects of green tea extract catechin on the treatment of diastolic dysfunction in pediatric cardiomyopathy patients

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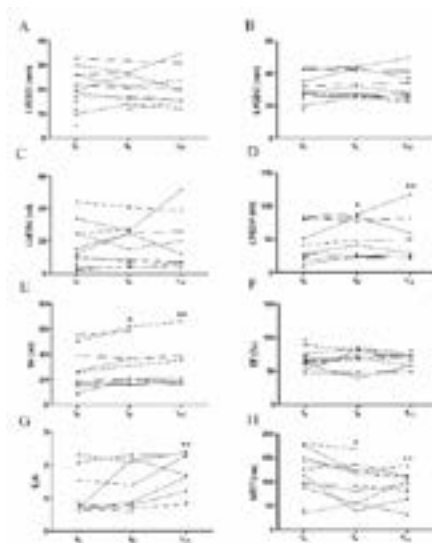
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Objectives: To assess the effects of green tea extract catechin on cardiac function and other clinical features in pediatric patients with cardiomyopathies.

Methods: 12 pediatric cardiomyopathy patients with diastolic dysfunction were enrolled for the study. Echocardiography, ECG, and laboratory tests were performed before and after the catechin administration for 12 months. Next Generation Sequencing was conducted to find out the potential causative gene variants in all patients.

Results: A significant decrease of isovolumetric relaxation time (115 ± 46 vs 100 ± 42 ms, $P=0.047$ at 6 months; 115 ± 46 vs 94 ± 30 ms, $P=0.033$ at 12 months), an increase of left ventricle end diastolic volume (40 ± 28 vs 53 ± 28 ml, $P=0.028$ at 6 months; 40 ± 28 vs 48 ± 33 ml, $P=0.011$ at 12 months) and stroke volume (25 ± 16 vs 32 ± 17 ml, $P=0.022$ at 6 months; 25 ± 16 vs 30 ± 17 ml, $P=0.021$ at 12 months) were observed with echocardiography in these patients 6-month after the treatment with catechin. Ejection fraction, left ventricular wall thickness, biatrial dimension remained unchanged. No significant side effects were observed in the patients tested.

Conclusions: This study indicates that Ca^{2+} desensitizing green tea extract catechin, is helpful in correcting the impaired relaxation in pediatric cardiomyopathy patients with diastolic dysfunction.



Biography

Jie Tian completed his phd from Chongqing Medical University and then devoted himself to the clinic, teaching and research of children's cardiovascular diseases for 32 years. He was also an overseas student in The Affiliated Hospital of University of Oxford in UK and Cornell University in USA, respectively. He has an honor to achieve the allowance for experts from the State Council of China and is one of the first and second evaluation experts of NSFC. He now is the vice president of Chongqing Medical University, the leader of pediatrics cardiology and the vice leader of Group of Cardiology Diseases, The Society of Pediatrics, Chinese Medical Association. He undertakes 2 cooperative projects of the national 985 and 873 programs and 29 science projects from 7 programs of NSFC. He has published 34 papers in reputed journals and has been serving as an editorial board member of repute.

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