Methylenephenidate Induced Myocarditis

Recep Kurt, Hakan Güneş, Mehmet Birhan Yılmaz, Hekim Karapınar
Cumhuriyet University School of Medicine Department of Cardiology, Sivas

Methylenephenidate is a drug with central nervous stimulating action and with similar effects as amphetamines.

A 14-year-old child was diagnosed with attention-deficit hyperactivity disorder (ADHD) 3 months before admission. He was started on methylphenidate (Concerta®) 18 mg daily for a month. Six days before admission, methylphenidate dose was increased to 36 mg by the pediatric psychiatrist. Patient was admitted to our hospital suffering from sweating, palpitation, dyspnea and chest pain. There was no murmur on auscultation. ECG demonstrated tachycardia and biphasic ventricular premature complexes. His temperature was 37.6 °C, white blood cell and hemoglobin were in normal range, creatinine kinase, creatinine kinase MB fraction levels were elevated, troponin I was 6.29 IU (upper limit of normal: 0.1), CRP was 24.2 mg/l with a sedimentation of 14 mm/h. Screening for infectious pathogens, immunological markers were all negative. Thyroid function tests were normal. Echocardiography showed a left ventricular ejection fraction (EF) of 50% without segmental wall motion abnormality. Methylenephenidate was discontinued following hospitalization. Coronary angiography showed normal coronary arteries. Eight days after hospitalization, creatinine kinase and troponin I levels decreased to normal levels. Recovery was achieved completely. On follow-up coronary echocardiography was repeated and EF was noted to be 60%. The investigation yielded tentative diagnosis of temporary drug-induced myocarditis.


PP-118

Serum 25-hydroxyvitamin D Level is Associated with Aortic Distensibility and Left Ventricle Hypertrophy in Newly Diagnosed Type 2 Diabetes Mellitus

Hasan Kaya1, Ebru Öntürk Tekbaş1, Faruk Ertas1, Ümit Kocyigit1, Murat Yıksıçık1, Mehmet Salih Dogan2, Cengiz Özüstk2
1Department of Cardiology, Dicle University Faculty of Medicine, Diyarbakir, 2Department of Physical Medicine and Rehabilitation, Dicle University Faculty of Medicine, Diyarbakır, 3Department of Biochemistry, Dicle University Faculty of Medicine, Diyarbakır

Objective: Ankylosing spondylitis (AS) is a chronic inflammatory disease which may be associated with cardiovascular complications. The aim of the study was to investigate aortic elastic properties and serum asymmetric dimethylarginine (ADMA) levels in patients with AS without any cardiac involvement.

Materials-Methods: Fifty-five AS patients and 30 age/gender matched healthy subjects were enrolled into this study. Fasting glucose, serum lipids, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and ADMA were studied. Aortic strain, distensibility and stiffness index were calculated from aortic diameters measured by transthoracic echocardiography and simultaneous blood pressure measurements.

Results: ESR and CRP were higher in patients group. Serum ADMA levels were also higher in AS group than in controls (0.76 ± 0.18 vs. 0.34 ± 0.12, p < 0.001). In subanalysis of DM patients, ADMA levels were significantly lower in anti-TNF-alfa treatment group than conventional treatment group (0.68 ± 0.15 vs. 0.87 ± 0.18, p < 0.001). Mean aortic strain and distensibility were lower and stiffness index was higher in AS group than controls. No correlation between ADMA and aortic elastic properties was observed in AS group, a negative significant correlation was found between duration of AS and aortic strain and distensibility.

Conclusion: Our study suggests that patients with AS without cardiac involvement, aortic elasticity was impaired and ADMA levels were increased, while there was no significant correlation between aortic elastic properties and ADMA levels.

PP-119

Assessment of Serum ADMA Levels and Aortic Elastic Properties in Patients With Ankylosing Spondylitis

PP-120

Comparison of Aortic Diameters of Aviators

PP-121

Comparison of Aortic Distensibility

PP-118

Serum 25-hydroxyvitamin D Level is Associated with Aortic Distensibility and Left Ventricle Hypertrophy in Newly Diagnosed Type 2 Diabetes Mellitus

Osman Kuloğlu1, Mustafa Gür1, Taner Şeker2, Gihan Yüksel Kalkancı1, Sinan K-room, Demir Yildirim Şahan2, Hazir Harbalioğlu1, Caner Turkoğlu1, Armağan Acıcele1, Zafir Elbasan1, Betül Özlatan1, Murat Çaylı1
1Adana Numune Training and Research Hospital, Department of Cardiology, Adana, 2Adana Numune Training and Research Hospital, Department of Endocrinology and Metabolism, Adana

Background: Epidemiological studies suggested that there were an inverse association between vitamin D status and risk and presence of type 2 diabetes mellitus (DM). Although vitamin D is effective on fragmentation of elastic fibers in the aortic media, relationship between vitamin D status and elastic property of aorta (aortic distensibility) has not been investigated in diabetic patients. We aimed to evaluate the association between serum vitamin D status and aortic distensibility in patients with DM.

Methods: We studied 136 patients with newly diagnosed DM (mean age: 62.9 ± 10.6 years). The patients were divided into two groups according to the serum 25-hydroxy-vitamin D level (Vitamin D deficiency group < 20 ng/ml (n=80) and vitamin Deficient group ≥ 20 ng/ml (n=56)). Serum 25-hydroxyvitamin D was measured using a direct competitive chemiluminescent immunoassay. Aortic distensibility was calculated from the echocardiographically derived ascending aorta diameters and hemodynamic pressure measurements. Left ventricle mass index (LVMI) was determined according to Devereux formula.

Results: The lowest aortic distensibility values and highest hs-CRP and LVMl values were observed in vitamin D deficiency group compared with vitamin Deficient group (p < 0.001). Table-2. Multiple regression analysis showed that vitamin D level was independently associated with LVMI (β=0.259, p=0.001), aortic distensibility (β=0.369, p<0.001), hs-CRP (β=-0.220, p=0.002) and body mass index (β=-0.167, p=0.015) in patients with DM.

Conclusions: In diabetic patients, serum 25-hydroxyvitamin D level was independently associated with aortic distensibility. Vitamin D may play a role on pathogenesis of impaired elastic properties of aorta in type 2 DM.

Table. Comparison of Baseline, Laboratory and Echocardiographic Findings Between the Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Vitamin D Deficiency Group (n=80)</th>
<th>Vitamin D Deficient Group (n=56)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>59.3 ± 7.5</td>
<td>58.4 ± 7.9</td>
<td>0.493</td>
</tr>
<tr>
<td>Hs-CRP (mg/dl)</td>
<td>1.11 ± 0.73</td>
<td>0.65 ± 0.34</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LVMl (g/m2)</td>
<td>123.1 ± 40.0</td>
<td>99.3 ± 23.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Aortic Distensibility (cm2 dyn/s±10^6)</td>
<td>2.67 ± 1.49</td>
<td>3.41 ± 1.44</td>
<td>0.005</td>
</tr>
<tr>
<td>Hs-CRP, high sensitive C reactive protein, LVMl, left ventricular mass index</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>