CORRELATION BETWEEN SELECTED ANTHROPOMETRIC, BIOCHEMICAL PARAMETERS AND CRP-REACTIVE PROTEIN CONCENTRATION AMONG PATIENTS WITH ENDOCRINE DISORDERS

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INTRODUCTION:
Anthropometric studies are one of the methods, by means of which it is possible to assess patient’s nutritional status.

AIM:
The aim of this study was to assess the relationship between the selected anthropometric as well as biochemical parameters and CRP-reactive protein concentration among patients with endocrine disorders.

MATERIALS AND METHODS:
The studied group involved all patients hospitalized at the Endocrinology Department in the Piekar Medical Centre in Piekar Slaskie from 2nd January 2012 to 31st December 2012 who met the inclusion criteria - 299 subjects (264 women and 35 men). Anthropometric studies and body composition analysis were carried out and results of biological parameters were analyzed. The following indices were measured: BMI, WHR, WHtR and biochemical tests as follows: 25(OH)D₃, CRP and lipid profile. The study was retrospective and non-interventional. α=0.05.

RESULTS:

<table>
<thead>
<tr>
<th>Concentration of</th>
<th>Mean</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>25(OH)D₃ [ng/ml]</td>
<td>20.3</td>
<td>8.3</td>
</tr>
<tr>
<td>CRP reactive protein [mg/l]</td>
<td>4.7</td>
<td>7.4</td>
</tr>
<tr>
<td>Total cholesterol [mg/dl]</td>
<td>212.1</td>
<td>45.4</td>
</tr>
<tr>
<td>HDL cholesterol [mg/dl]</td>
<td>61.5</td>
<td>19.3</td>
</tr>
<tr>
<td>LDL cholesterol [mg/dl]</td>
<td>124.9</td>
<td>42.4</td>
</tr>
<tr>
<td>Triglycerides [mg/dl]</td>
<td>135.4</td>
<td>76.3</td>
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</tbody>
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There were observed positive correlation between:
- BMI and CRP-reactive protein (R=0.33; p<0.0001);
- WHtR and CRP-reactive protein (R=0.38; p<0.0001);
- WHR and CRP-reactive protein (R=0.26; p<0.0001);
- percentage of body fat and CRP-reactive protein (R=0.26; p<0.0001);
- waist circumference and CRP-reactive protein (R=0.26; p<0.0001).

CONCLUSION:
Induction of inflammation was observed in all patients with abnormal body weight. Inflammation intensity (determined on the basis of CRP-concentration) was higher in overweight than obese patients.