Metabolic syndrome in users of a Community Pharmacy

Pereira, O. R. *(1)*, Lopes, M. *(1)*, Lopes, F. *(1)*, Serra, I. *(2)*

*(1)* DTDT, Escola Superior de Saúde, Instituto Politécnico de Bragança, Av. D. Afonso V, 5300-121 Bragança; *(2)* Farmácia Vale D’ Álvaro, Bairro Braguinha Edifício Trialto-Lote D, 5300, Bragança; *oliviapereira@ipb.pt*

**Introduction**

Metabolic syndrome (MetS) includes metabolic abnormalities such as dyslipidemia, hypertension, and diabetes mellitus and abdominal obesity that were revealed to be major risk factors of cardiovascular diseases. The aim of the study was describe the prevalence of MetS risk factors in users of a Pharmacy of Bragança, using the criteria proposed by the ATP-III.

**Materials and Methods**

- Cross-sectional study
- Sample: 80 adult population of Bragança, of both gender, users of a Community Pharmacy
- Collecting data
  - (1) Questionary:
    - alcohol, tobacco, drugs consumption and diet
  - (2) Anthropometric and biochemical parameters
    - Weight, height (BMI calculation)
    - Waist circumference
    - Blood pressure determination
    - Glycemia determination
    - Total Cholesterol determination

It was considered to have MetS if presented three or more of the following features:

1. **Waist circumference** > 102 cm (men) and > 88 cm (women);
2. **Total Cholesterol** >190 mg/dL;
3. **Systolic blood pressure** > 130 and/or **Diastolic blood pressure** > 85 mmHg;
4. **Fasting Glucose** > 110 mg/dL.

**Results**

**Gender:** 61% female

**Age:** 60-69 (35.0%); >69 (26.3%); 50-59 (16.3%)

**Diet:** 66% do not

**BMI:** Overweight (11.2%); Obesity (2.2%)

**Alcohol:** 51% of consumption

**Smoking:** 31%

![Fig. 1- Prevalence of MetS Risk Factors](image)

<table>
<thead>
<tr>
<th>Metabolic syndrome risk factors %</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waist Circumference</td>
<td>33.7</td>
<td>33.3</td>
<td>66.7</td>
</tr>
<tr>
<td>Total Cholesterol</td>
<td>45.0</td>
<td>36.1</td>
<td>63.9</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>46.2</td>
<td>40.6</td>
<td>59.45</td>
</tr>
<tr>
<td>Fasting Glucose</td>
<td>35.0</td>
<td>57.2</td>
<td>42.8</td>
</tr>
<tr>
<td>4 Risk Factors</td>
<td>7.5</td>
<td>9.7</td>
<td>6.1</td>
</tr>
</tbody>
</table>

**Conclusions**

The high prevalence of MetS risk factors found in this study alerts for the diagnosis and treatment of the MetS, retarding and preventing future consequences like diabetes and cardiovascular disease. As MetS is recognized as a cause of high morbidity and cardiovascular mortality in Portugal, the present study becomes to important, due the lack of studies in this area.