INTRODUCTION

• Type 1 diabetes is one of the most common chronic disease in pediatric age. The incidence is increasing worldwide, with significant variations between countries. In Portugal, the prevalence in pediatric age is about 0.16%.

• This study aims to characterize a pediatric population with type 1 diabetes and to identify factors influencing the metabolic control.

METHODS

• Retrospective analysis of children and adolescents diagnosed with type 1 diabetes, between January of 2001 and December of 2013, that were followed, in at least one year, in a secondary care hospital, in Portugal.

• Demographic, clinical and laboratorial data were collected. IBM SPSS®20 was used for statistical analysis. P values below of 0.05 were regarded as statistical significant.

RESULTS

Descriptive analysis

• Sample: 59 patients
  24 females (40.7%)
  35 males (59.3%)
  12.96 ± 4.6 years (from 2 to 18 years)
  13.09 ± 4.0 years (from 1 to 18 years)

• Age at time of diagnosis: 8.34 ± 3.8 years
  Females: 7.97 ± 4.0 years
  Males: 8.59 ± 3.8 years

• Diabetic ketoacidosis (DK) at diagnosis and follow-up
  62% diagnosis
  59% follow-up
  14% No

• Others autoimmune diseases:
  6 patients (10.2%)
  → 3 coeliac disease
  → 3 thyroiditis
  → 1 hepatitis

• HbA1c value: 8.6 ± 1.5%
  Females → 8.5% (from 6.3 to 13.3)
  Males → 8.6% (from 5.7 to 12.6)

• Body mass index:
  <5%: 22%
  5-9.5%: 25%
  9.5-16.9%: 29%
  >16.9%: 26%

• Cardiovascular complications:
  → Microalbuminuria: 2 patients (3.4%)
  → Dislipidemia: 5 patients (8.5%)
  → Excess weight: 14 patients (23.7%)
  → Hypertension: 2 patients (3.4%)

• Current treatment for diabetes:
  → Continuous subcutaneous insulin infusion: 4 patients (6.8%)
  → Multiple insulin injection therapy: 55 patients (93.2%)

Comparative analysis

<table>
<thead>
<tr>
<th>Groups</th>
<th>HbA1c &lt;7.5%</th>
<th>HbA1c ≥7.5%</th>
<th>P value</th>
<th>Groups</th>
<th>HbA1c &lt;7.5%</th>
<th>HbA1c ≥7.5%</th>
<th>P value</th>
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</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>26</td>
<td>0.951</td>
<td>Age at diagnosis ≤10y</td>
<td>7</td>
<td>31</td>
<td>0.097</td>
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<tr>
<td>Female</td>
<td>6</td>
<td>18</td>
<td></td>
<td>Age at diagnosis &gt;10y</td>
<td>8</td>
<td>13</td>
<td></td>
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<tr>
<td>DK at diagnosis</td>
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<td>15</td>
<td>0.628</td>
<td>Follow-up ≤ 5 years</td>
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<td>26</td>
<td>0.144</td>
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<tr>
<td>No DK at diagnosis</td>
<td>10</td>
<td>22</td>
<td></td>
<td>Follow-up &gt; 5 years</td>
<td>3</td>
<td>18</td>
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<tr>
<td>BMI &lt; P 85</td>
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<td>33</td>
<td>1.0</td>
<td>Current age ≤10y</td>
<td>3</td>
<td>6</td>
<td>0.680</td>
</tr>
<tr>
<td>BMI &gt; P 85</td>
<td>3</td>
<td>11</td>
<td></td>
<td>Current age &gt;10y</td>
<td>12</td>
<td>38</td>
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</tr>
</tbody>
</table>

DISCUSSION/CONCLUSION

• This study corroborated the increasing incidence of type 1 diabetes, which enhances the importance of a better knowledge of this disease.

• The majority of our new cases were diagnosed in males and during autumn and winter.

• There were not identified factors influencing the metabolic control, which could be explained by the small sample of this study that limits the statistical analysis.