GP135 PREVALENCE OF OVERWEIGHT AND OBESITY IN CHILDREN WITH TYPE 1 DIABETES ATTENDING A TERTIARY CLINIC IN IRELAND AND THE RELATIONSHIP WITH GLYCAEMIC CONTROL

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Aims We aim to find the prevalence of overweight and obesity in children aged over the age 5 with type 1 diabetes who attend the tertiary referral clinic in our Lady’s Children’s Hospital Crumlin, Dublin.

Methods We measured heights and weights of the children with type 1 diabetes attending the clinic. We entered the data into our electronic database (Diamond version 1, Hicom). The electronic database calculates the child’s body mass index (kg/m²). We exported the data to SPSS Version 24 IBM. We calculated the children’s BMI Z-score using the WHO Reference 2007 SPSS macros package. We used the WHO 2007 Reference normative data and the definition of overweight as BMI z-score for age more than 1 standard deviation away from the mean (represents 85th centile). We used the WHO definition of obesity as BMI z-score for age more than 2 standard deviations away from the mean (represents 97th centile). We used the WHO 2007 Reference data for age more than 1 standard deviation away from the mean (represents 85th centile). We used the WHO definition of overweight as BMI z-score for age more than 1 standard deviation away from the mean (represents 85th centile). We used the WHO definition of obesity as BMI z-score for age more than 2 standard deviations away from the mean (represents 97th centile). We ran descriptive statistics. We analysed the relationship between BMI z-score and HbA1c using a linear regression model.

Results 541 children attended the diabetes clinic. 511 of these children were over the age of 5. Of these children 38.7% had a BMI z-score +1 SD away from the mean in the WHO reference data reflecting overweight. Of the 511 children 47 or 9.2% of them had a BMI z-score +2SD from the mean normative data reflecting obesity and 1.2% had a BMI z-score of +3SD away from the mean reflecting severe obesity. There was no statistically significant relationship between BMI z-score and HbA1c using linear regression.

Conclusion Our results highlight the high prevalence of overweight and obesity in children with type 1 diabetes. The prevalence of overweight and obesity is nearly double that of the general population. This is a relatively new phenomena. Various causes have been postulated including intensive insulin therapy since the early 90s as well as the secular trend in overweight and obesity.

Abstract GP136 Table 1 Percentage of patients at low, moderate and high risk on RIPC on baseline and at T1

<table>
<thead>
<tr>
<th>Risk category</th>
<th>Baseline</th>
<th>T1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>68.6%</td>
<td>73.8%</td>
</tr>
<tr>
<td>Moderate</td>
<td>16.3%</td>
<td>11.2%</td>
</tr>
<tr>
<td>High</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>

At baseline: 31.3% of patients had a moderate score and high scores on RIPC. At T1: 26.2% of patients had a moderate score and high psychosocial risk scores. Paired analysis showed that the difference in RIPC score between baseline and T1 was not significant (p>0.05). Three patients (3.3%) increased the risk from low to moderate, another 3 patients (3.3%) from low to high and 2 patients (2.2%) from moderate to high risk. However, 12 patients (13.3%) reduced the risk with a time: 7 patients (7.7%) moved from category of moderate risk to low risk, 3 (3.3%) - from high to low and 2 (2.2%) - from high to moderate risk category. The distribution of low, moderate and high risk patients did not differ significantly in baseline group and T1 (p>0.05)

Conclusions Almost one third of children with T1D in Irish population are at moderate and high psychosocial risk. The routine care provided by health professionals doesn’t reduce this risk significantly with time. Our data indicates the need of intervention by trained clinical psychologist for children with T1D and psychosocial risk.

GP136 PSYCHOSOCIAL RISK ASSESSMENT IN CHILDREN WITH TYPE 1 DIABETES IN IRELAND

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Objectives To evaluate and compare the risk for poor glycaemic control at two time points in an Irish cohort of children with T1D.

Methods The Risk Index for Poor Glycaemic Control (RIPC) is the screening tool to assess psychosocial risk where each score increases the risk of poor control and DKA on 10% (low risk score 0–1, moderate =2, high risk ≥3). The baseline data was collected for 2 years while follow up data collection (T1) began at least 6 months after the start of the study and continued for 2 years. No intervention was involved.

Results As a part of 2-year longitudinal study 245 children with T1D (129 males) aged 3–18 years (mean 11.7±3.5) were assessed at baseline. Total of 90 patients out of 245 were assessed for psychosocial risk at baseline and at T1 (Table 1).