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The North Jutland County Diabetic Retinopathy Study (NCDRS)
Non-ophthalmic parameters and the association to clinically significant macular oedema

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Purpose
To explore the influence from non-ophthalmic parameters on the prevalence of clinically significant macular oedema (CSME) in the present diabetic population.

Methods
This cross-sectional study comprised 656 type 1 and 328 type 2 diabetic subjects undergoing diabetic retinopathy screening in the County of North Jutland, Denmark during the period 1st April 2000 to 30th April 2004. The association between CSME and blood-pressure, HbA1c, age onset of diabetes and duration of diabetes was explored using logistic regression analysis. The association to blood-pressure reducing medication, lipid lowering medication, neuropathy and nephropathy was also explored.

Type 1 diabetic subjects were recruited from larger Aalborg, an urban area in the county of North Jutland, and comprised more than 75% of all known type 1 diabetic subjects. Type 2 diabetic subjects were recruited from the entire county of North Jutland and comprised less than 5% of all known type 2 diabetic subjects.

Results

Table 1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type 1</th>
<th>Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>Mean</td>
<td>Min</td>
</tr>
<tr>
<td>Duration of diabetes</td>
<td>Mean</td>
<td>Min</td>
</tr>
<tr>
<td>Bloodpressure</td>
<td>Mean</td>
<td>Min</td>
</tr>
</tbody>
</table>

Fig 1
Illustrates the association between prevalence of CSME and age of diabetic subjects, not controlling for other variables.

Fig 2
Illustrates the association between prevalence of CSME and duration of diabetes, not controlling for other variables.

Table 2

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type 1</th>
<th>Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at entry</td>
<td>Mean</td>
<td>Min</td>
</tr>
<tr>
<td>Duration of diabetes</td>
<td>Mean</td>
<td>Min</td>
</tr>
<tr>
<td>Bloodpressure</td>
<td>Mean</td>
<td>Min</td>
</tr>
</tbody>
</table>

Table 3

<table>
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<tr>
<th>Parameter</th>
<th>Type 1</th>
<th>Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
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<tr>
<td>Duration of diabetes</td>
<td>Mean</td>
<td>Min</td>
</tr>
<tr>
<td>Bloodpressure</td>
<td>Mean</td>
<td>Min</td>
</tr>
</tbody>
</table>

Conclusions

1. The prevalence of CSME was not influenced from any non-ophthalmic parameters among type 1 diabetic subjects.
2. Among type 2 diabetic subjects the prevalence of CSME was influenced from:
   a. Duration of diabetes
   b. HbA1c
c. Neuropathy
d. Nephropathy