

Type-2 diabetes and hypoglycaemia in the elderly – insights from the 6-months prospective DiaRegis follow-up

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Conclusions

- Elderly patients (≥ 70 years) with diabetes are at increased risk for hypoglycaemia. 413 patients (10.7%) suffered from episodes of any severity hypoglycaemia within the last 12 months - in the elderly more so than in younger patients <60 years (12.7% vs. 9.1%).
- Considering identified predictors of hypoglycaemia such as low fasting glucose levels, the use of sulfonylureas, and the presence of depression as covariates when making treatment decisions in the elderly will help to optimize glucose control while minimizing the risk of hypoglycaemia.

1. Background, Methods and Aims

- Intensified glucose control in the elderly has been questioned because of complications associated with antidiabetic pharmacotherapy such as hypoglycaemia.
- Prospective registry of pts with type-2 diabetes and failure of oral mono- or dual antidiabetic therapy. Comparison of patients at an age of < 60 years (n=1253) with those ≥ 70 years (n=1373).
- Aim of the present analysis was to identify predictors for hypoglycaemia in the elderly.
- Statistics: Variables as percent or medians; p-values based on χ^2 or Mann-Whitney-Wilcoxon test

2. Patient Characteristics

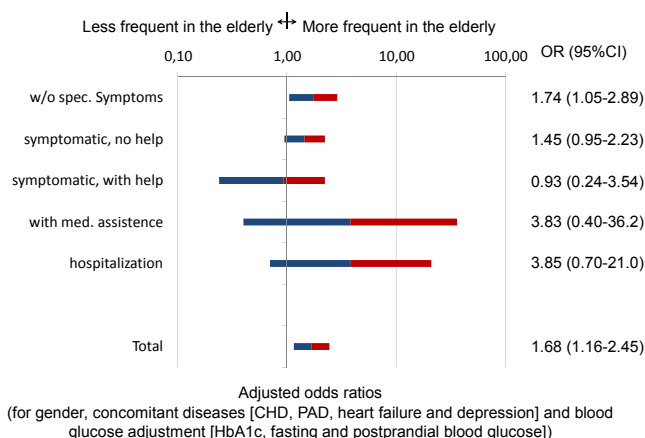
	Age ≥ 70 years (n=1,373)	Age < 60 years (n=1,253)	p-value
Age (years)*	74,0 (72,0-78,0)	54,0 (49,0-57,0)	<0,0001
Female (%)	51,1	42,5	<0,0001
Diabetes duration (years)*	6,8 (3,9-10,6)	4,1 (1,9-7,3)	<0,0001
BMI (kg/m ²)*	29,0 (26,0-33,0)	32,0 (28,0-36,0)	<0,0001
Waist circumference (cm)*	104 (96,0-113,0)	109 (99,0-120,0)	<0,0001
HbA1c (%)	7,3	7,6	<0,0001
Fasting plasma glucose (mg/dl)	138	146	<0,0001
Postprandial glucose (mg/dl)	180	189	<0,0001

*Median (Interquartile range)

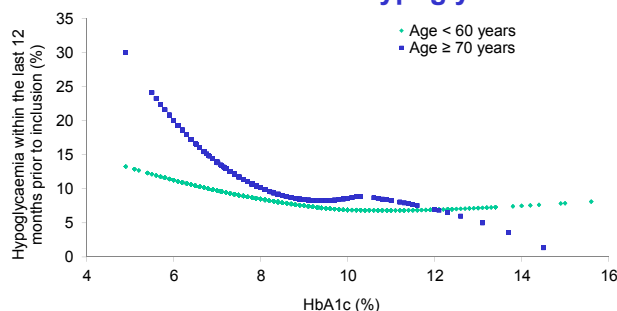
3. Pharmacotherapy

	Age ≥ 70 years (n=1,373)	Age < 60 years (n=1,253)	OR (95%CI)
Metformin (%)	78.4	89.1	0.44 (0.36-0.55)
Sulfonylureas (%)	35.0	22.1	1.89 (1.59-2.25)
Glucosidase inhibitors (%)	3.2	1.9	1.7 (1.02-2.8)
Glinides (%)	4.2	4.1	1.04 (0.71-1.53)
Glitazones (%)	4.5	7.7	0.57 (0.41-0.79)
DPP-4 inhibitors (%)	3.9	6.1	0.63 (0.44-0.91)

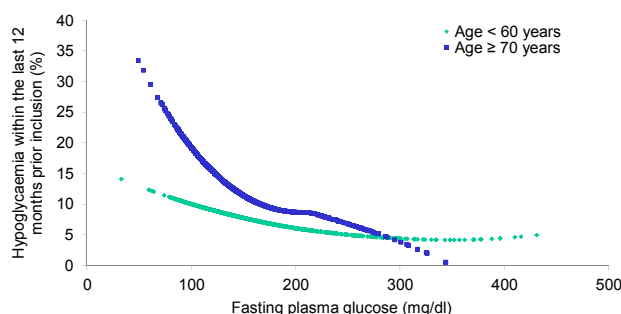
4. Anamnestic Hypoglycaemia



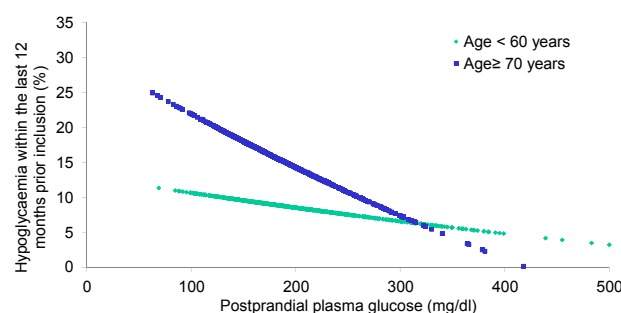
5. HbA1c vs. anamnestic Hypoglycaemia



6. Fasting Glucose vs. Hypoglycaemia



7. Postprandial Glucose vs. Hypoglycaemia



8. Independent predictors of hypoglycaemia

	Univariable OR (95%CI)	Multivariable OR (95%CI)
Age > 74 years	1.27 (0.92-1.74)	1.13 (0.76-1.70)
Women	0.98 (0.71-1.34)	0.95 (0.63-1.43)
HbA1c > 7.3%	0.65 (0.47-0.90)	0.90 (0.57-1.40)
FPG > 138 mg/dl	0.66 (0.47-0.92)	0.57 (0.36-0.88)
CHD	1.62 (1.16-2.26)	1.24 (0.79-1.95)
Stroke / TIA	2.10 (1.26-3.51)	1.82 (0.90-3.66)
Heart failure	1.68 (1.16-2.44)	1.33 (0.83-2.16)
Depression	3.88 (2.33-6.47)	4.52 (2.42-8.43)
Sulfonylureas	1.90 (1.38-2.62)	2.06 (1.36-3.10)
BG self-measurement	2.17 (1.35-3.50)	2.06 (1.23-3.46)