P-0955– Anti-diabetes treatment patterns associated with hypoglycaemia in elderly patients with type 2 diabetes in China

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Aims:

China has the largest number of people with diabetes in the world, with the majority of the patient population over 60 years old and living in urban areas. The aim of this study was to investigate the anti-diabetes treatment patterns associated with hypoglycaemia in elderly patients with type 2 diabetes in China.

Methods:

This was a multi-centre, cross-sectional, non-interventional study assessed blood glucose target attainment, anti-hyperglycemic treatment pattern and the clinical characteristics in older outpatients with T2DM in hospitals of China. This study collected information of older T2DM patients in a real life setting.

The primary outcome of this study was the proportion of patients attained blood glucose control target defined as HbA1c<7%. The inclusion criteria for this study are: 1) Patient should fully knew and understood the content of consent form, and the patient was willed and able to signed an informed consent form; 2) Outpatient with confirmed T2DM; 3) Age≥60 years.

Results:

There were 426 elderly patients with medical history of hypoglycaemia. Among these patients, the proportion of patients who received OAD therapy was 30.5%, the proportions of patients who received insulin alone and insulin in combination with OADs were 28.6% and 35.2%, respectively. Among these diabetic medications, usage of SU, meglitindes and insulin are prone to cause hypoglycaemia.

Results:

There were 426 elderly patients with medical history of hypoglycaemia. Among these patients, the proportion of patients who received oral antidiabetic drug (OAD) therapy was 30.5%, the proportions of patients who received insulin alone and insulin in combination with OADs were 28.6% and 35.2%, respectively.

Among these diabetic medications, usage of sulfonylureas (SU), meglitindes and insulin are prone to cause hypoglycaemia. Compared to all patients, the use of SU or meglitindes as mono-OAD in combination with insulin treatment was more often in this subgroup patients with hypoglycemia (1.4% vs 1.1%, 1.2% vs 0.9% respectively), the use of biguanide and SU or biguanide and meglitindes as dual-OADs in combination with insulin was more often in patients with hypoglycemia (2.1% vs 1.6%, 1.2% vs 0.7% respectively), the use of biguanide and SU and alpha-glucosidase inhibitor (AGI) or biguanide and meglitindes and AGI as triple-OADs in combination with insulin was more often in patients with hypoglycemia (1.2% vs 0.9%, 0.5% vs 0.3% respectively). The use of insulin therapy alone or insulin therapy in combination with OADs was higher in patients with hypoglycemia (28.6% vs 15.5%, 35.2% vs 28.3% respectively).

Conclusion:

In these old patients with medical history of hypoglycaemia occurrence, the use of sulfonylureas and meglitindes in combination with insulin treatment and the use of insulin therapy alone were associated with hypoglycemia and shall be taken care of the risk of hypoglycemia when used.

Summary of treatment pattern for T2DM

Category Sub-Category Drug name	Total (N=1520) n (%)	Hypoglycaemia (N=426) n (%)
No treatment	40 (2.6)	3 (0.7)
Only diet control and exercise	114 (7.5)	17 (4.0)
OAD -Mono therapy	255 (16.8)	39 (9.2)
Biguanide	131 (8.6)	22 (5.2)
AGI	60 (3.9)	7 (1.6)
SU	41 (2.7)	6 (1.4)
TZD	5 (0.3)	0
Meglitindes	7 (0.5)	2 (0.5)
DPP-4 inhibitors	9 (0.6)	1 (0.2)
OAD-Combined therapy	436 (28.7)	91 (21.4)
Dual	300 (19.7)	64 (15.0)
Biguanide + SU	98 (6.4)	25 (5.9)
Biguanide + AGI	71 (4.7)	14 (3.3)
AGI + SU	49 (3.2)	6 (1.4)
Biguanide + Meglitindes	20 (1.3)	6 (1.4)
Biguanide + DPP-4 inhibitors	18 (1.2)	6 (1.4)
AGI + Meglitindes	13 (0.9)	3 (0.7)
Triple	136 (8.9)	27 (6.3)
Biguanide + AGI + SU	78 (5.1)	19 (4.5)
Biguanide + AGI + TZD	10 (0.7)	1 (0.2)
Biguanide + AGI + Meglitindes	9 (0.6)	1 (0.2)
Biguanide + SU + DPP-4i	9 (0.6)	2 (0.5)

(Continued)

Category Sub-Category Drug name	Total (N=1520) n (%)	Hypoglycaemia (N=426) n (%)
Biguanide + SU + TZD	9 (0.6)	2 (0.5)
Biguanide + AGI + DPP-4i	6 (0.4)	1 (0.2)
Insulin only	236 (15.5)	122 (28.6)
OAD+ Insulin	430 (28.3)	150 (35.2)
Mono OAD+ insulin		
Biguanide	93 (6.1)	39 (9.2)
AGI	90 (5.9)	29 (6.8)
SU	16 (1.1)	6 (1.4)
Meglitindes	13 (0.9)	5 (1.2)
DPP-4 inhibitors	8 (0.5)	3 (0.7)
TZD	4 (0.3)	1 (0.2)
Dual OADs + insulin		
Biguanide + AGI	86 (5.7)	32 (7.5)
Biguanide + SU	25 (1.6)	9 (2.1)
AGI + SU	17 (1.1)	3 (0.7)
Biguanide + Meglitindes	11 (0.7)	5 (1.2)
AGI + Meglitindes	9 (0.6)	2 (0.5)
AGI + DPP-4i	7 (0.5)	2 (0.5)
Triple OADs + insulin		
Biguanide + AGI + SU	14 (0.9)	5 (1.2)
Biguanide + AGI + Meglitindes	4 (0.3)	2 (0.5)
Biguanide + AGI + DPP-4i	3 (0.2)	1 (0.2)