

Abstract: P-1349

The efficacy of exenatide and liraglutide among South Asians in the Association of British Clinical Diabetologists nationwide audits

Aims:

We investigated whether the GLP-1 receptor agonists (GLP-1RA), exenatide and liraglutide, are as effective among South Asian patients as compared with Caucasian patients.

Methods:

Data was obtained from two nationwide audit databases on the use of exenatide twice daily (2007-2009) and liraglutide 1.2mg daily (2009-2012) in clinical practice (UK). Latest data on HbA1c and weight reduction at 32 weeks were compared between South Asian (Indian, Pakistani, Bangladeshi) and Caucasian patients, stratified by background non-insulin or insulin treatment. Patients switching from a thiazolidinedione, dipeptidyl peptidase-4 inhibitor or exenatide to liraglutide were excluded from analyses. ANCOVA analyses of HbA1c and weight reduction were performed adjusting for baseline HbA1c, BMI or weight, gender, age, duration of diabetes, number of oral antidiabetes drugs, total daily insulin dose and insulin dose changes as appropriate.

Results:

134/2561 (5.2%) of exenatide patients and 101/1526 (6.6%) of liraglutide patients were identified as non-mixed South Asian and with available HbA1c data. South Asians had lower baseline BMI than Caucasians (exenatide 35.3 v 39.7 kg/m², p<0.001, liraglutide 37.1 v 39.6 kg/m², p=0.001). Overall HbA1c and weight results, as well as results divided according to non-insulin and insulin-treated patients, are shown in Table 1.

Conclusions:

South Asians achieve lower weight reduction with GLP-1RA treatment as compared with Caucasian patients but this difference disappeared after adjusting for the effects of lower baseline weight. Exenatide and liraglutide may be less effective in improving glycaemic control among non-insulin-treated South Asian patients.

		N	Non-adjusted			Adjusted		
			Caucasian	South Asian	p-value	Caucasian	South Asian	p-value
EXENATIDE								
HbA1c change (%)								
	All patients	2427,134	-0.86 (±0.04)	-0.72 (±0.14)	0.35	-0.81 (±0.05)	-0.47 (±0.27)	0.21
	Non-insulin	1513,71	-1.12 (±0.04)	-1.14 (±0.20)	0.92	-1.09 (±0.05)	-0.60 (±0.28)	0.08
	Insulin	914,63	-0.42 (±0.06)	-0.25 (±0.18)	0.37	-0.27 (±0.09)	-0.29 (±0.72)	0.98
Weight change (kg)								
	All patients	2167,101	-5.0 (±0.1)	-3.5 (±0.5)	0.006	-4.8 (±0.1)	-4.4 (±0.7)	0.56
	Non-insulin	1344,53	-4.1 (±0.2)	-3.4(±0.7)	0.28	-3.9 (±0.2)	-4.2 (±0.9)	0.72
	Insulin	823,48	-6.3 (±0.2)	-3.7 (0.8)	0.37	-6.3 (±0.2)	-6.2 (±1.1)	0.92
LIRAGLUTIDE								
HbA1c change (%)								
	All patients	1425,101	-1.07 (±0.04)	-0.77 (±0.14)	0.047	-1.10 (±0.04)	-0.93 (±0.16)	0.29
	Non-insulin	762,47	-1.31 (±0.06)	-0.75 (±0.23)	0.021	-1.31 (±0.05)	-0.85 (±0.22)	0.040
	Insulin	663,54	-0.79 (±0.06)	-0.79 (±0.18)	0.99	-0.86 (±0.06)	-0.88 (±0.21)	0.92
Weight change (kg)								
	All patients	1285,88	-3.6 (±0.2)	-2.4 (±0.5)	0.033	-3.6 (±0.2)	-3.1 (±0.6)	0.42
	Non-insulin	694,43	-3.6 (±0.2)	-1.9 (±0.9)	0.09	-3.5 (±0.2)	-2.8 (±1.0)	0.52
	Insulin	591,45	-3.7 (±0.2)	-2.9 (±0.5)	0.17	-3.5 (±0.2)	-3.7 (±0.7)	0.82

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