THE EFFECT OF LIRAGLUTIDE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: CLINICAL AND METABOLIC CHARACTERISTICS

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INTRODUCTION

In patients with non-controlled type 2 diabetes mellitus (DM2) and obesity treated with oral therapy, liraglutide treatment should improve glycemic and metabolic control.

LABORATORY PARAMETERS	BASELINE (range)	AFTER 1 Month (range)	AFTER 3 Months (range)	AFTER 6 Months (range)
HbA1c	6.5-10.4 %		4.9-10.3	5.5-7.5
FPG	5.7-11.2 mmol/L	4.6-8.8	4.9-7.2	4.3-10.8
PPG	7.2-14.2 mmol/L	5.4-11.2	6.1-8.5	5.3-11.9
Cholesterol	2.9-6.6 mmol/L		2.9-6.3	3.0-5.6
Trygliceride	1.1-3.4 mmol/L		1.1-2.5	1.0-2.6
HDL	1-1.5 mmol/L		1.1-1.3	1.0-1.6
LDL	1.2-4.6 mmol/L		1.7-3.5	1.6-4.3

Table 1. Laboratory characteristics of female patients

LABORATORY PARAMETERS	BASELINE (range)	AFTER 1 Month (range)	AFTER 3 Months (range)	AFTER 6 Months (range)
HbA1c	7.1-14.2 %		6.2-10.3	5.2-9.2
FPG	6.4-14.3 mmol/L	5.2-10.1	5.4-9.7	5.8-8.0
PPG	9.8-20.7 mmol/L	5.3-13.3	6.1-8.9	5.3-11.8
Cholesterol	3.8-11.3 mmol/L		3.8-6.7	3.7-6.2
Trygliceride	1.8-22.5 mmol/L		1.6-4.1	1.5-2.5
HDL	0.9-1.9 mmol/L		1.1-2.0	1.0-2.0
LDL	1.9-9.8 mmol/L		1.7-4.5	1.6-4.5

Table 2. Laboratory characteristics of male patients

REFERENCE:
Rondanelli M, Perna S, Astrone P, Grugnetti A, Solerte SB, Guido D. Twenty-four-week effects of liraglutide on body composition, adherence to appetite, and lipid profile in overweight and obese patients with type 2 diabetes mellitus. Patient Prefer Adherence. 2016 Mar 24;10:407-13. doi: 10.2147/PPA.S97383. eCollection 2016.

METHODS

Retrospective descriptive study. Liraglutide treatment was started in 46 outpatients with uncontrolled DM2. The effect of therapy was evaluated between September 2013. and January 2016. Age, sex, duration of diabetes, weight, BMI, HbA1c, fasting and postprandial glucose, lipid profile, were extracted at baseline/starting liraglutide, after 1, 3 and 6 months and at the end of follow up.

RESULTS

Average age in 32 females was 59.3±18.2 years (range 35-82), in 14 males 55.8±16.3 (range 37-74 years); Duration of DM2 was 2 months-17 years in females, and 6 months-12 years in male patients. Baseline values:

Women: Weight 85-130 kg, BMI 35,2-48,9 kg/m^2, HbA1c 6.5-10.4%, fasting glucose 5.7-11.2 mmol/L, postprandial glucose 7.2-14.2 mmol/L, cholesterol 2.9-6.6 mmol/L, trygliceride 1.1-3.4 mmol/L, HDL 1-1.5 mmol/L, LDL 1.2-4.6 mmol/L.

Men: Weight 90-142 kg, BMI 35,2-41,7 kg/m^2, HbA1c 7.1-14.2%, fasting glucose 6.4-14.3 mmol/L, postprandial glucose 9.8-20.7 mmol/L, cholesterol 3.8-11.3 mmol/L, trygliceride 1.8-22.5 mmol/L, HDL 0.9-1.9 mmol/L, LDL 1.9-9.8 mmol/L.

After 1 month females lost 1-8 kg, males 0-3 kg. After 3 months women lost 1-16 kg, and men 1-4 kg. After 6 months females lost 3-18 kg (1 patient +2 kg), and males 2-4 kg (1 patient +4 kg).
At the end of follow up (21 months for women, and 15 months for men) female patients lost 2-18 kg, males 2-5 kg, although 2 female and 2 male had weight gain. At 15 female and 6 male patients final dose of liraglutide was 1,8 mg s.c., and in 5 women and 2 men basal insulin was added. HbA1c was 5.5-7.5% in female, and 5.9-9.1% in male patients.

CONCLUSION

Liraglutide therapy resulted in glycemic and lipide profile improvement and weight loss in most patients.