

KETOGENIC DIET WITH SUPPLEMENTS OF PHYTOEXTRACTS FOR THE TREATMENT OF TYPE 2 DIABETES

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Introduction

A low-carb diet may be effective in improving metabolic compensation in cases of type 2 diabetes and, as a result, in reducing the pharmacological therapy being administered.

Materials and Methods

The study involved the recruitment of 72 patients from an outpatients' practice. All of them were overweight females affected by type 2 diabetes and were undergoing pharmacological therapy. The patients were divided into two groups: those following a low-carb diet and those on a balanced hypocaloric diet. Anthropometric and hematochemical tests were conducted at the beginning and at the end of the study. The aim of this work was that of improving metabolic compensation and encouraging weight reduction. The results obtained were elaborated by means of the t-Test or with Fisher's exact test according to the case being considered, Results: of the 72 patients recruited, 60 concluded the study; age, mean and standard deviation of the LC group was 56.3 ± 6.75 , while in the control group it was 52.37 ± 8.52 . Regarding the glycemc profile HbA1c it was reduced by 22.39% in the LC group ($p < 0.01$) and average glycemia diminished by 39,67% ($p > 0.01$); while in the control group, the reductions were 2.97% ($p > 0.01$) and 9.40% ($p < 0.01$) respectively. As for anthropometric assessments, in the LC group weight was reduced by 12.14% ($p < 0.01$), BMI by 11.83% ($p < 0.01$) and the fat mass by 15.66% ($p < 0.01$); the control group showed non significant reductions of 4.79, 4.80% e 7.59% respectively. No significant variations were observed in the electrolytic pattern or in renal and kidney functions.

Conclusions

Unlike the balanced hypocaloric diet, the Low-carb one improves metabolic compensation soon after it starts (5 weeks), and thus it becomes necessary to adapt the pharmacological therapy to these variations.

LC GROUP PHARMACOLOGICAL THERAPY		
PATIENT	WEEK 0	WEEK 5
1	metformin 1000 mg	metformin 250 mg
2	glucophage 500 mg insulin 6 units	glucophage 100 mg insulin 3 units
3	glucophage 1000 mg	glucophage 150 mg
4	glucophage 250 mg metformin 250 mg	glucophage 150 mg
5	metformin 500 mg	glucophage 250 mg
6	metformina 1000 mg	metformin 250 mg
7	glucophage 500 mg	xilevia 250 mg
8	metformin 500 mg glucophage 500 mg	metformin 500 mg
9	metformin 1000 mg	glucophage 250 mg
10	metformin 2000 mg	metformin 500 mg
11	glucophage 1000 mg insulin 4 units	xilevia 250 mg
12	metformin 500 mg glucophage 250 mg	glucophage 250 mg
13	metformin 1000 mg insulin 10 units	metformin 250 mg
14	glucophage 500 mg	xilevia 250 mg
15	metformin 1000 mg insulin 6 units	metformin 500 mg
16	Glucophage 1000 mg	Glucophage 250 mg
17	Metformin 250 mg Glucophage 500 mg	Xilevia 250 mg
18	Xilevia 1000 mg	Xilevia 250 mg
19	Metformin 2000 mg	Metformin 500 mg
20	Glucophage 1000 mg	Glucophage 250 mg
21	Metformin 1000 mg	Glucophage 500 mg
22	Glucophage 500 mg Insulin 10 units	Glucophage 250 mg Insulin 2 units
23	Metformin 2000 mg	Metformin 250 mg
24	Metformin 1000 mg	Xilevia 500 mg
25	Glucophage 2500 mg	Glucophage 250 mg
26	Metformin 1000 mg Insulin 10 units	Metformin 200 mg
27	Metformin 2000 mg	Glucophage 250 mg
28	Metformin 2500 mg Insulin 5 units	Xilevia 500 mg
29	Glucophage 1000 mg	Xilevia 250 mg
30	Metformin 1500 mg	Metformin 250 mg