Impact of Functional Insulin Therapy on Glycemic Control in Type 1 Diabetics

Zineb Ait Si Ali, Hind Ouakrim, Sana Rafi, Ghizlane El Mghari, Nawal El Ansari
Department of Endocrinology, Diabetes, Metabolic Diseases and Nutrition
Mohammed VI University Hospital of Marrakesh
Faculty of medicine and Pharmacy of Marrakesh,
Cadi Ayyad University, Marrakesh, Morocco

Abstract:

Background:

Functional insulin therapy (FIT) is a therapeutic method that aims to approximate physiological insulin secretion as closely as possible. It optimizes diabetes control while preserving a certain degree of dietary flexibility, and also helps diabetic patients understand and control their treatment.

Patients & methods:

We conducted a prospective study at the endocrinology department of Mohammed VI University Hospital of Marrakesh, including 49 type 1 diabetic patients, admitted for functional insulin therapy education, clinical and biological data, before and 3 months after, were collected. The aim of our study was to evaluate the effect of functional insulin therapy on glycemic control in type 1 diabetic patients.

Results:

The mean age of our patients was 20.94 ± 8.62 years, with a predominance of females (55.1%). The mean duration of diabetes was 7.40 ± 7.10 years. Mean HbA1c decreased from 9.5±1.66% at baseline to 7.9±1.33% at 3 months after FIT. In all patients, there was a reduction in the frequency of hypoglycemic episodes, the average frequency of hypoglycemia decreased from 3.27 to 1.66 times per week. Most of our patients reported better dietary flexibility after FIT; linked to greater freedom in the time and content of meals.

Discussion & Conclusion:

FIT is a teaching approach of intensified insulin therapy, that attempts to reproduce the physiological secretion of insulin. Its aim is to transfer to the patient the decisional process and the management of its insulin treatment.

It improves metabolic control, decreases the frequency of mild and severe hypoglycemia, it enhances self-esteem in diabetic patients and improves their quality of life. The effect of FIT on glycemic control, particularly on HbA1c reduction, is confirmed by the literature, especially in patients with initially higher HbA1c levels.

ESDL Journal