

Lights And Shadows In The Anti-Diabetic Therapy

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Introduction: The main purpose of antidiabetic treatment is to guarantee a good glycemetic control, that should avoid both hyperglycemic and hypoglycemic events. However, such a balance is often critical to be reached. The present study analyzed the diabetic management for the years 2008-2013 focusing on iatrogenic hypoglycemia, therapeutic failure (achievement of the glycated hemoglobin-HbA_{1c} target values) and the Body Mass Index (BMI).

Materials and Methods: Diabetic patients have been divided into insulin/Secretagogue Drugs (SD), Glucagon Like Peptide-1 Receptor Agonist (GLP-1 RA) and Dipeptidylpeptidase-4 inhibitors (DPP-4i), according to antidiabetic therapy and to the connected risk of hypoglycemia. Hypoglycemic events, in particular, have been detected through the Ginde et al.'s algorithm (Ginde et al., 2008), fracture discharges, access to emergency for coma or driving mishaps, and through SMBG (Self-Monitoring Blood Glucose) with blood glucose levels ≤ 70 mg/dl. The achievement of HbA_{1c} target level and BMI target have been evaluated as well.

Results: The analysis revealed that hypoglycemic events involve 16,23% of diabetic patients of the Local Health Authority (LHA). In particular, the major risk of hypoglycemia was detected for patients treated with insulin/SD, while the group with DPP-4i resulted to have the lowest risk. Furthermore, the treatment with DPP-4i was the only one allowing the therapeutic target of HbA_{1c} to be reached ($\leq 7\%$). Similarly, focusing on BMI, the DPP-4i treatment was associated with the major decrease in the number of overweight patients, although no therapy effectively reduced the mean BMI value under the threshold (≤ 25 kg/m²).

Conclusions: The management of diabetes represents a critical balance intended to counteract both hyperglycemic and hypoglycemic events. DPP-4i resulted to be the only effective treatment in avoiding hypoglycemia and in allowing HbA_{1c}-target achievement. Insulin/SD therapy, in contrast, correlated with an increased risk of hypoglycemic events, weight gain, and failure to control HbA_{1c} hemetic levels.

Ginde et al. (2008) *BMC Endocrine Disorders*. 8, 1-7