

CSII AND SAP THERAPY IN PANCREATECTOMIZED PATIENT: AN INTRIGUING OPTION FOR OPTIMIZING METABOLIC CONTROL. CASE REPORT

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Patients with pancreatogenic diabetes (T3cDM) are at increased risk of iatrogenic hypoglycemia (hypo) and persistent hyperglycaemia, due to peculiar pathophysiologic abnormalities. The use of SAP therapy (insulin pump - CSII- integrated with continuous glucose monitoring - CGM) has recently increased in T1DM and in selected patients with T2DM. Few data are available on T3cDM: a reduction in the frequency of hypos and HbA1c level was reported in a single patient uncontrolled with multi-injection therapy (MDI). We present the case of a female patient referred to us at the age of 45 years after total pancreatectomy for a suspected neuroendocrine tumour; in 2005 she had nephrectomy for kidney cancer (pT2G3N0). Histological exam showed pancreatic metastasis from kidney cancer. Before surgery the patient weighted 60 kg, her height was 170 cm, BMI 20.8 kg/m². After surgery she developed T3cDM and was treated with MDI until 3/2013, with poor acceptance of disease, average HbA1c 7.9% with great glycaemic instability despite the low daily insulin requirement (27 IU, basal/meal ratio 1/2) and training to carbo counting. CGM was therefore placed (CGM DexcomG4) in march 2013 in order to optimize glycemic profiles, reduce blood glucose variability and improve the patient's quality of life. During CGM she had lower mean HbA1c (7.5%) and glycaemic variability expressed as SD, but similar mean glucose levels (182±100 vs 174±90 mg/dl) respect to the self-monitoring (SMBG) period.

A significant reduction of hypos (5.4 vs 6.7% was obtained in 3 months) but dawn phenomenon and difficulties in managing physical activities persisted. SAP therapy was then started on 10/2013 (insulin pump Roche Combo+CGM DexcomG4) resulting in maintenance of low daily insulin requirement (27 IU, basal/meal ratio 1) and body weight. After 8 months of SAP all glycaemic parameters improved (HbA1c 6.6%, blood glucose 162±68 mg/dl, time on hypoglycaemia 4%), the patient attained better control during physical activities and acceptance of the disease improved. CSII was able to optimize management of boluses for meals and correction of hypo/hyperglycemic episodes. This report suggests the usefulness of SAP therapy in young patients with unstable diabetes after total pancreatectomy, not well controlled by MDI+SMBG. To our knowledge this is the first report of SAP therapy for T3cDM in total pancreatectomy.