EVALUATION OF THE INCIDENCE AND CLINICAL CHARACTERISTICS OF GLUCOSE METABOLISM ALTERATIONS DURING THE FOLLOW-UP OF SURGICALLY TREATED INSULINOMAS

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INTRODUCTION

The incidence of glucose metabolism alterations during the follow-up of surgically treated insulinomas is largely unknown. Our purpose was to evaluate the incidence, and the clinical characteristics, of diabetes and prediabetes in this population.

METHODS

We retrospectively analyzed the cases diagnosed as insulinomas in a Central Hospital in Portugal (Hospital São João) in the period between January 1980 and December 2015.

RESULTS

PATIENTS PRESENTATION

- We identified 19 patients with insulinoma
  - 68% women
  - Age at onset of symptoms: 49 years
  - Whipple triad: 100% patients
    - Neuroglycopenic symptoms: 100%
    - Autonomic symptoms: 79%
  - No case was associated with MEN-1 syndrome
  - 5 patients were treated with diazoxide preoperatively

TUMOR CHARACTERISTICS

- All tumors were solitary
- Median diameter of 1.8 cm
- Tumor location
  - Head: 10 tumors
  - Body: 4 tumors
  - Tail: 4 tumors
  - Uncinate process: 1 tumor
- Only 1 tumor, did not present positive insulin staining (with evidence of endogenous hyperinsulinism)
- There were no cases of lymphatic or vascular invasion

GLUCOSE METABOLISM ALTERATIONS

- Median follow-up: 48 months
- only 4 patients with a follow-up inferior to 6 months because of loss of follow-up or recent intervention.

9 patients (47%) presented glucose metabolism alterations

- 8 patients developed diabetes
  - 4 in immediate postoperative period
  - 1 patient 4 months after surgery
  - 3 patients 10-12 years after surgery
  - 1 patient presented prediabetes (54 months after surgery)
- Mean age at diagnosis: 54 years
- Treatment
  - 3 patients treated with insulin
    - 3 treated with oral antidiabetic drugs
    - 1 with insulin and oral antidiabetic drugs
    - 2 with lifestyle intervention
- Complications: only 1 patient presented microalbuminuria (no other micro- or macrovascular complications observed)

CONCLUSIONS

Glucose metabolism alterations are a frequent complication during the follow-up of insulinomas. Prevention, early diagnosis and treatment of diabetes in patients with surgically treated insulinomas must be a priority during the follow-up of these patients.