

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.

