

## Seizures, Metabolic or Neurologic Cause?

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## Background and Aims

Insulinoma is the most frequent cause of organic hypoglycemia. In 90% of cases [1], it is a benign pancreatic tumor, which secretes insulin [2]. The aim of this clinical case presentation is to highlight the need for early diagnosis of organic hypoglycemia in the prevention of neurological damage [3].

## Material and Methods

We present the clinical case of a 13-year-old patient. An assessment was made of the patient’s history, clinical examination, paraclinical investigations and interdisciplinary consults.

## Results

A 13-year-old patient, with obesity and recurrent headaches for more than one month, presented a short-term tonic-clonic seizure with spontaneous recovery, followed by postcritical drowsiness. The blood sample taken after this episode showed low plasma glucose of 55 mg/dL. The glycemia was monitored and several episodes with neuroglycopenic symptoms (headache and aggressive behavior) were detected, with glucose levels between 35 and 120 mg/dL during the day. A neurological cause of the seizure episode was excluded by performing an EEG and head CT. Blood analysis revealed a serum glucose level of 66 mg/dL, with an insulinemia of 77.26  $\mu$ U/mL, value which suggested the probability of insulinoma, which was confirmed by an abdominal MRI. The treatment of choice for insulinoma is surgical excision [4,5]. Medical management until the surgical procedure consisted of the prevention of hypoglycemia by ingesting long-acting carbohydrates every 3 h, alternating with 10% glucose administered intravenously during the night, associated with anticonvulsant treatment.

## Conclusions

In recurrent cases of moderate or severe hypoglycemia with neuroglycopenic symptoms, we should consider an organic cause. A simple venous/capillary blood determination of glucose can guide us in a correct diagnosis.

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