CASE REPORT OF INSULINOMA

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Insulinoma is a very rare but important islet cell tumour of pancreas. A high index of suspicion is very essential in arriving at a diagnosis. The classic presentation is with recurrent fasting hypoglycemia. The nonspecific and often bizzare symptoms, occurring at irregular intervals leads to a delay in diagnosis or sometimes to a misdiagnosis as a neurologic or psychiatric disorder. It can be confirmed by finding of fasting hypoglycemia and elevated fasting insulin/glucose ratio and the relieving of symptoms with administration of intravenous glucose.

CASE REPORT

A 35 years old multi gravida was admitted in a medical ward, Lady Reading Hospital, Peshawar, on 2-4-1996. She presented with attacks of unconsciousness, sinking of the heart and convulsions with frothing for the last two weeks. She was not incontinent during the attack. She had the same attacks at home 2 weeks ago and the local compounders used to give her steroids and glucose infusion. She used to recover within a few minutes. Clinically she was obese, pale and on systemic examination there were no significant abnormal findings. A provisional diagnosis of Epilepsy/psychoneurosis was made.

She was thoroughly investigated, during her stay in the hospital. All the routine investigations were normal except her fasting blood sugar, which ranged between 30-70 mg%. At this stage we suspected spontaneous hypo-glycemia. Patient was put on parenteral glucose to be given late at night till breakfast. There were no further attacks. Keeping this diagnosis (spontaneous hypoglycemia) in mind she was further investigated. Her insulin levels were done twice at the time of attacks. They were 10.8 and 11.8 uU/ml (normal range 1 - 17.5 uU/ml). Fasting blood sugars were done at the same time. They were 5 and 13mg% (normal range 65 - 110mg%). Thus there were inappropriately increased levels of insulin inspite of very low fasting blood sugars. C.T. Scan abdomen was normal. Angiogram of the coeliac trunk showed an abnormal blush at the tail of the pancreas, highly suggestive of an insulinoma. The patient was operated on 18-4-1996 and an adenoma of 2 cm diameter was found at the tail of the pancreas, which was removed and specimen was sent for histopathology.

The report was consistent with Islet cell tumour of pancreas (insulinoma). Patient condition since then is quite stable and there are no further attacks.

DISCUSSION

Insulinoma is an endocranial tumour of the pancreas, which originators from beta cells[1]. Incidence is 1 per 2 million per year and occurs most commonly between the

ages of 40 and 70 years. Approximately 60% of patients with insulinoma are women. Between 5 -10% of insulinomas are malignant. In patient with MEN TYPE 1 syndrome, insulinomas occur at an earlier age and multiple benign tumors are very common.[1]

The symptoms of hypoglycemia may be present for many years prior to the diagnosis of insulinoma because the symptoms of chronic hypoglycemia are non-specific[2]. Patient is usually diagnosed as psycho-neurotic, epileptic, malingerer and sufferer from an organic nervous disease[5]. Initially symptoms resemble duodenal ulcer and some patients are disorientated. Symptoms are mainly due to catecholamine release and CNS dysfunction. Patient has sweating, trembling, dizziness, blurring of vision, great hunger, incoordinated movements, diplopia, hallucinations, fits, passing in to semiconsciousness or coma, with dilated pupils and extreme spasticity.[2]

The diagnosis of insulinoma is based on the demonstration of a low plasma glucose level in the presence of an inappropriately high plasma insulin concentration. The most reliable test is a prolonged supervised fast. In normal individuals fasting results in a decline in both plasma glucose and insulin levels. In the majority of patients with an insulinoma. hypoglycemia occurs with in 24 hours, but in a small number of patients a fast lasting 72 hours with or without exercise is required to induce hypoglycemia. Plasma for insulin measurements should be obtained at the time the patient is hypoglycemic. In patients with an insulinoma plasma insulin levels is inappropriately elevated[3].

In addition to determine plasma insulin levels, it is also helpful to measure plasma C-peptide concentrations during the fast to eliminate the possibility of self-administration of insulin[4]. Additional studies which are helpful in localizing tumour in pancreas may be necessary e.g. C.T. Scan abdomen, Ultra sound abdomen, Pancreatic angiography (tumor appears as vascular mass), percutaneous transhepatic portal venography with selective sampling for insulin measurement.

The treatment is surgical removal of the tumour, which will usually restore normal glycemia. In 5-10% of patients, hypoglycemia persists following surgery, owing to metastatic insulinomas, islet cell hypertrophy, or a tumour that could not be detected during surgery.[5] These patients will require medical therapy. Initial treatment should include frequent carbohydrate feeding. If this is not successful, drugs are used which include, Diazoxide (300-1200mg/day), phenytion, verapamil, streptozocin with or without 5-flourouracil, 3 may be useful in the treatment of malignant insulinomas that can not be completely removed surgically. Prognosis is poor but some patients can survive for long time.

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