'What kind of diabetes did you say I have?'

A15-year-old male with septo-optic dysplasia, panhypopituitarism, developmental delay, diabetes insipidus, and autism was admitted to the hospital for hypoglycaemia. The patient started having sudden seizure activity that prompted fuller evaluation. His glucose level was 28mg/dl (1.6mmol/L). The patient was resuscitated with intravenous glucose and his seizure activity stopped.

The past medical history included the diagnosis of septo-optic dysplasia at birth, growth hormone deficiency, secondary hypothyroidism, secondary adrenal insufficiency, diabetes insipidus, blindness, aggressive behaviour and autism. The patient had been taking growth hormone, levothyroxine, hydrocortisone and desmopressin acetate. There was no history of missed doses, fever, missed meals, vomiting, nor any other illnesses. He attends a school for blind children with special needs. His condition was monitored by a school nurse and supervised by a physician.

His physical examination revealed no rashes, hyperpigmentation, nor any focal neurological finding. Laboratory findings revealed initial hypoglycaemia as mentioned previously, normal T_4, and somatomedin-C levels, white blood cell count, and electrolytes.

During hospital stay, the patient recovered from hypoglycaemia and went back to his previous functioning levels. Since there was no clear aetiology for the hypoglycaemia episode, the endocrinology team asked for documented dietary intake and scheduled medications given prior to hospital admission. This revealed no missed medication doses, but showed two daily doses of 20 units of insulin glargine (rDNA origin) injection that were given to the patient in the past two days prior to hospital admission. Further investigation showed that there was a new physician and he ordered the insulin doses for a presumed diagnosis of diabetes mellitus rather than diabetes insipidus. The nurse never questioned the sudden start of insulin therapy without the documentation of hyperglycaemia. The mother was notified about the cause of hypoglycaemia; she sought legal action against this physician at the state school. The school system decided to settle the case out of court. The physician was penalised by the local State Medical Board and was required to take educational training courses to be able to differentiate types of diabetes.

Discussion

'Diabetes' means to 'flow through' or to 'siphon' in Greek language since affected patients urinate frequently. Ancient Greek physicians used to taste urine to differentiate the two types of diabetes (mellitus vs insipidus) to distinguish the honeyed sweet diabetes. While the two conditions share the word 'diabetes', their aetiologies and medical management are completely different. Of note, Wolfram syndrome, or DIDMOAD syndrome, combines diabetes insipidus (DI), diabetes mellitus (DM), optic nerve atrophy (OA) and deafness (D).

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