Two Clinical Cases: Severe Hypoglycemia and Then Hyperglycemia in Children with Anemia in Iron Therapy

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Background

Diabetes type 1 in children could be present in emergency with hypoglycemia acute episode like an absent or similar to an epilepsy seizure. Blood examinations give evidence of microcytosis iron anemia in a little group of these patients. This disease is often diagnosed when diabetic ketoacidosis occurs. Classical symptoms are frequent urination, increase thirst and hunger with weight loss and iron anemia and with a future risk of osteoporosis in adult age. Moreover, an early diagnostic of iron deficit in DMT1 may be a potential preventive therapeutic possibility with specific nutritional indication in case of confirm with a hyperglycemia and insulin deficit.

Materials and Methods

C.H. is a female of 14 half months and who had accessed to Treviglio Hospital in Emergency, 9 months ago for sever hypoglycemia, at 5 months of age, with suspect of absence at weak up in the morning but with a glycemia of 43 mg/dl with blood test at home and after sugar packet 88 mg/dl in hospital. I prefer to control her with periodic examinations at home with glusometrum and ketonometum machine daily and after evidence of 151 mg/dl of glycemia. I suggest a restricted diet for sweet foods and sugar or similar beverages. For an increase of 306 mg/dl until 314 mg/dl at 9:30 in the morning after a light breakfast and at 7:30; after 1 hour in my Consultory glycemia decrease until 132 mg/dl. In Hub center, she did peptide C 0,77 ng/mL (1.10-4.40) and insulin of 3,1 mUI/L (2.6-25), and glycemia of 64 mg/dL (60-100) with a HbA1 of 31 mMol/Mol fasting (20-42); iron anemia is of 49 µg/dL (50-120) and Hb 11.9 g/dL (11.5-14.5) with MCV 76.5 fL (70-84) and with ferritin of 34 ug/dL (15-150).

S.P. is a boy of 8 years and 10 months who is followed in Auxological Consultory for a gradual decrease of growth, from the age of 2-3 years, in the last year he has had a loss of weight of 8, 7%. Excluding infective and intolerance or allergy pathology. We have done a periodic control for iron anemia treated with oral therapy and of glycemia for a ketoacidosis characteristic during examination with 1 to 5 plus of ketonuria, confirm by ketonemia and with range of glycemia of 59 mg/dl until 136 mg/dl fasting. With a diet for severe glucose intolerance, without sweet foods, he did blood tests with a glycemia of 81 mg/dl (60-110) and peptide C 0.23 nMol/L (0.16-1.10) fasting. Glycemia 1 hour after breakfast is of 108 mg/dl and 2 hours of post-prandial of 72 mg/dl with HbA1 of 35 mMol/Mol (<39), insulin of 2,8 mU/L (2,6-27) and IGF1 of 119 ng/ml (54,9-206,4); iron anemia is of 16 µg/dL and Hb 12.2 g/dL (13-18) with MCV 84.2 fL (77-99) after therapy iron is of 99 ug/dL and ferritin of 43 ug/dL (20-200) with vitamin D of 27.7 ng/mL (30-100).

Results

These two clinical cases have a symptomatic hypoglycemia like first episode of disease with classical symptoms and signs. These families present difficult to follow a regular nutrition owing to use of sugar in beverages and carbohydrates and glucose in every breakfast of the day. This phenomenon determines a problematic nutritional behavior without family rules. Monitoring of glucosemia and ketonemia every day before or after daily meals permits us to control their diet and reduce apport of glucose in breakfast or snack with fruit, integral brad or others carbohydrates with a regular rapport of lipids also.

Conclusions

Monitoring these patients in the first two years of age, we need to educate their family to do a good shopping and have a correct nutritional status in their life style and to give a good example for their children, just during the first years of life. In Special way, if they present weak and asthenia fasting or profuse sweating and abdominal pain or periodic headache after a normal meal with polyuria and polydipsia in the night.

References

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