

Diabetes presenting as reactive hypoglycemia. Is it possible?

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INTRODUCTION:

Hypoglycemia can be the presenting symptom of Type 2 diabetes. The patients may experience hypoglycemic symptoms, post-prandially (3-5 hrs post-meals), preceded by fasting & post-meals hypoglycemia. We are describing a patient of Type 2 diabetes, who was initially managed with diet and metformin. Later on he presented with symptomatic post-meals, delayed hypoglycemia.

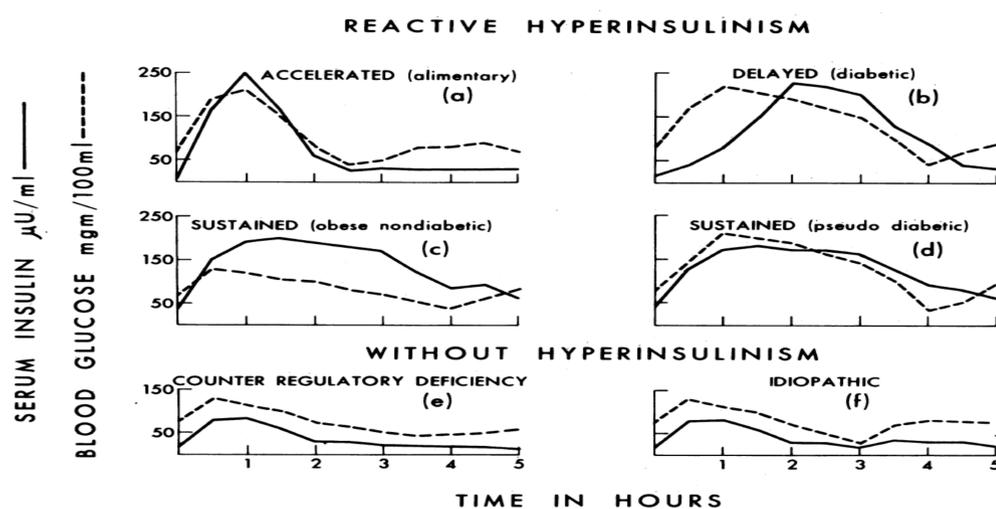
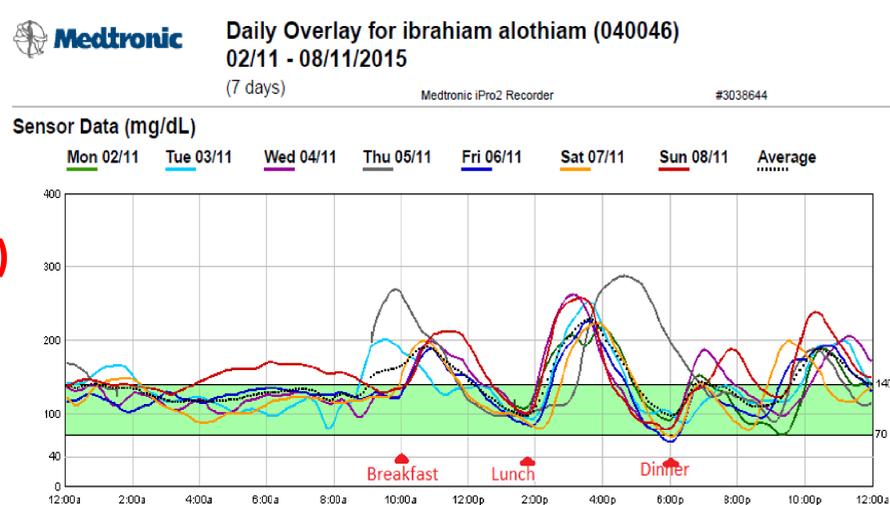
CLINICAL CASE:

58yrs old Saudi gentleman had Type 2 diabetes for 5 yrs, dyslipidemia, Mitral valve disease, Bronchial asthma, GERD, vitamin D deficiency, BPH and depressive illness. He had presented to the outpatient Diabetes clinic in November, 2015 with post-prandial hypoglycemic symptoms, 2-3 hrs post-meals esp. lunch & supper (with sympathetic symptoms and Whipple's triad). SMBG during hypoglycemia was never below 70 mg/dl. He denied any neurological symptoms. The minimum recorded RBS at home was 70 mg/dL. He had intermittent retrosternal burning. His weight & the bowel habits were usual. Rest of the systemic review was unremarkable. His deceased father had diabetes. Our patient was initially on Metformin that was later discontinued. Other medications included Simvastatin, Cholecalciferol, Mebeverine, Pantoprazole, Fluoxetine, Symbicort inhaler and Ibuprofen. He was fully alert, oriented and co-operative. Vitals were preserved. BMI 28.09 kg/m². There was Lt hallux valgus deformity. CVS examination revealed a Grade 1, non-radiating systolic murmur in the mitral area. Rest of the general & systemic exam was unremarkable.

The complete blood count, ESR, liver and renal parameters were well within normal limits. Bone profile, Vitamin D, PTH were normal. HbA1c was 42mols/mols IFCC. Serum testosterone, LH, FSH, Prolactin and PSA levels were normal. (C-peptide and insulin levels-pending). Echocardiogram showed mitral valve prolapse and mild MR. U/S Abdomen & prostate were normal. Upper GI endoscopy was consistent with gastro-esophageal reflux disease. His fasting blood glucose was 82 mg/dl. The 75 G oral glucose tolerance test showed an RPG of 220 mg/dl, 2hrs post glucose, that dropped to 65 mg/dl after 3 hrs. The continuous glucose monitoring system for 7 days revealed post-prandial peaks of >250 mg/dl, followed by nadir upto 70 mg/dl (Figure 1)

Our patient was diagnosed to have a reactive hypoglycemia, which can be a feature of Mild Type 2 diabetes. He was referred to the nutritionist, advised avoidance of simple sugars, encouraged to take complex carbohydrates and small, frequent meals. The patient's hypoglycemic episodes got settled with the change in his dietary pattern and Metformin 500mg, twice daily.

CGMS (Figure 1)



Patterns of Reactive Hypoglycemia (Figure 2) [1]

CONCLUSION:

Impaired glucose tolerance and diabetes are the known causes of hyperinsulinemic, delayed (≥3hrs) post-prandial hypoglycemia. Patients may have hypoglycemic symptoms without documented hypoglycemia [2], as in our case.

REFERENCES:

- 1-John H.Karam. Reactive Hypoglycemia-Mechanisms and Management. *Calif Med*: 114(5): 64-70; May, 1971.
- 2-Rosalyn S.Yalow, PhD., and Solomon A.Berson, M.D., New York. Dynamics of insulin secretion in hypoglycemia. *Diabetes* vol.14, no.6, June 1965.