BE SWEET TO YOUR HEART

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CROZER HEALTH

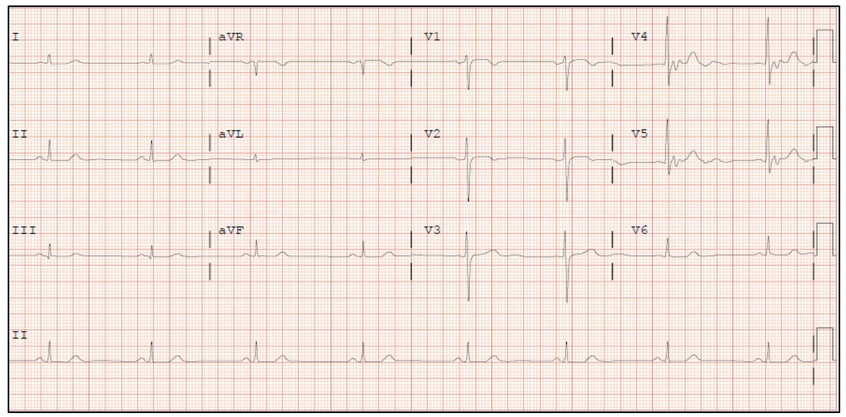
INTRODUCTION

- Hypoglycemia is not an uncommon encounter; however, untreated hypoglycemia may result in devastating events.
- Its clinical manifestations are non-specific, including altered mentation, lethargy, diaphoresis, and palpitation.
- Compared to tachycardia, sinus bradycardia is an uncommon presentation of hypoglycemia and is rarely reported.

CASE PRESENTATION

Demographic	70-years-old female
Past Medical History	• Bicuspid aortic valve with aortic aneurysm post repair. • History of eating disorders during college.
Presentation	• Fatigue and depressed for 4 months. • Unintentional weight loss of 20 pounds in 2 months. • Not on insulin or oral hypoglycemic agents.
Examination	• Vital signs normal except heart rate 46 bpm. • Cardiopulmonary examination: normal.

Hemoglobin **WBC**	12.6 (Normal) 5.7 (Normal)	**Cosyntropin stimulation test**	Appropriate response
TSH	0.9 (Normal)	**Urine drug screen, alcohol**	Negative
CMP	Within normal limits	**C-peptide**	Normal
Insulin level	Within normal limits	**Culture, CRP, Procalcitonin**	Negative
CT Head, MRI abdomen and pelvis :Normal Transthoracic echocardiogram. :Normal EF with no RWMA			



HOSPITAL COURSE

Fingerstick glucose: 31mg/dL. Given 1 ampule of Dextrose 50%

↓ 30 minutes later

Glucose improved to 138mg/dL and HR improved to 80 bpm.

↓ Day 2

Recurrent hypoglycemia with glucose of 48mg/dL and symptomatic sinus bradycardia at 53 bpm.

Intravenous dextrose infusion initiated with continuous cardiac monitoring.

↓

Heart rate remained between 60 to 80 bpm.

↓

Discharged with psychiatry follow up for eating disorder and depression.

DISCUSSION

- In the light of this case, we illustrate the possibility of sinus bradycardia caused by hypoglycemia in a non-diabetic patient with eating disorders.
- The exact mechanism is not well established yet.
- Proposed pathophysiology include decreased catecholamine levels or down-regulation of cardiac adrenergic receptors.

CONCLUSION

- Hypoglycemia-induced bradycardia could occur in non-diabetic patients, usually in the setting of eating disorders.
- Clinicians must be aware of this unusual hypoglycemia manifestation and manage it promptly to prevent life-threatening events.