



## CASE REPORT

# Factitious Disorder: A Paradox Case with Recurrent Symptomatic Hypoglycemia

**Dana Hassneiah, MD\***, **Seyma Sevinc, MD**, **Kendyl Stewart, MD**, **Charlotte Chaiklin, MD**  
and **Marcia Williams, MD, FACP**



University of Miami and Miami VA Medical Center, USA

\*Corresponding author: Dana Hassneiah, MD, PGY3 Internal Medicine Resident, Jackson Memorial Hospital, University of Miami Miller School of Medicine, USA, Tel: (305)-812-6821

## Introduction

Factitious disorder is defined by the Diagnostic and Statistical Manual of Mental Disorders 5<sup>th</sup> Edition [1] as the falsification of physical or psychological signs or symptoms or induction of injury or disease for the purpose of presenting oneself as ill or injured, even in the absence of obvious external reward. Self-administration of insulin or insulin secretagogues, such as sulfonylureas, as a cause of factitious hypoglycemia has been well described. While the surreptitious use of exogenous insulin can be readily identified by the measurement of low levels of c-peptide in the blood, insulin secretagogue use as a cause of factitious hypoglycemia is clinically indistinguishable from organic causes of hyperinsulinism such as insulinomas [2,3]. We present a case demonstrating the practical challenge of diagnosing sulfonylurea-induced factitious hypoglycemia.

## Case Presentation

A 57-year-old woman with a past medical history of diabetes mellitus (A1C 4.5%) and depression presented to the hospital for evaluation of recurrent episodes of hypoglycemia. She complained of lightheadedness, diaphoresis, and measured blood glucoses in the 40s at home. She also reported fatigue, polyuria, and cold intolerance for the last few weeks. Home medications included Glipizide and Metformin but she reported stopping these medications a few weeks ago when symptoms developed. She denied taking any other

medications. In the emergency department, she was found to have a glucose of 42.

## Hospital Course

The patient was hospitalized and started on a Dextrose intravenous infusion. She underwent primary adrenal insufficiency testing with a normal cosyntropin stimulation test. She had normal glucose levels throughout her hospitalization. She was discharged home with instruction to discontinue use of oral hypoglycemic medications. A week after discharge the patient was found unresponsive and was brought to the emergency department for further evaluation. En route to the hospital, the patient was noted to have a blood glucose in the 20s. In the emergency department her blood glucose was 44. She was again admitted and started on a dextrose intravenous infusion. Despite continuous dextrose administration she was noted to have recurrent hypoglycemic episodes. Insulin, proinsulin, c-peptide, sulfonylurea, and meglitinide blood tests were collected. Insulin and c-peptide levels resulted as 116.6 mIU/mL and 9.24 ng/mL, respectively which suggested either insulinoma or insulin secretagogue induced hypoglycemia. She underwent abdominal computerized technology which showed no evidence of a pancreatic mass to suggest insulinoma. The patient requested to be discharged prior to the results of the additional laboratory tests. She was discharged and again advised to avoid using her home diabetes medications which she agreed to. After discharge, sulfonylurea level resulted at 1700

ng/ml finalizing the diagnosis of sulfonylurea-induced factitious hypoglycemia.

## Discussion

When faced with a patient with hypoglycemia of unknown etiology, the most important tests to obtain are a plasma insulin and c-peptide level when glucose levels are low. Both insulinomas and sulfonylurea-induced hypoglycemia will present with elevated c-peptide and insulin levels. However, in patients with hypoglycemia and elevated c-peptide levels, insulin levels above 100 mIU/mL are suggestive of sulfonylurea induced hypoglycemia as patients with insulinomas typically have insulin levels just above normal [4]. The use of a plasma sulfonylurea levels is the only way to definitively distinguish between insulinomas and sulfonylurea induced hypoglycemia. Factitious hypoglycemia can be a diagnostic challenge for physicians and often leads to costly and unnecessary work ups [5]. It is most common in women with diabetes mellitus in their third or fourth decades of life. The prognosis for sulfonylurea-induced factitious disorder is poor, with increased time to diagnosis correlating with lower rates of recovery and increased rates of suicide. Such patients require multidisciplinary treatment with both psychiatry and psychotherapy. Antidepressants and antipsychotics have not been shown to be beneficial for the treatment of factitious disorder.

## Conclusion

In patients with hypoglycemia of unknown etiology, early suspicion, and workup of sulfonylurea-induced factitious hypoglycemia is warranted as early diagnosis is associated with a better prognosis. Patients with hypoglycemia of unknown etiology should have insulin, c-peptide, and sulfonylurea level measured during a low blood glucose episode.

## Contribution

All authors contributed to this work equally.

## References

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