

Case Report

A rare presentation of acute hyperglycemia with secondary mania: a case report

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ABSTRACT

This case report aims to highlight the diagnostic challenges in consultation-liaison psychiatry in case of Type 1 Diabetes Mellitus. Author report the case of a 60-year-old male who presented to the Psychiatry OPD with first episode of mania. Although hypoglycaemia is known to be associated with multiple psychiatric manifestations, the incidence of psychiatric symptoms and disorders in association with hyperglycaemia is not well reported. This case report highlights the rare presentation of secondary mania in a patient with Type 1 Diabetes Mellitus.

Keywords: Consultation liaison psychiatry, Hyperglycemia, Mania, Type 1 diabetes mellitus

INTRODUCTION

Hyperglycaemia has been defined by the World Health Organization (WHO) as fasting blood glucose levels greater than 7.0 mmol/L (126mg/dL) and/or post-prandial blood glucose levels (two hours after meals) greater than 11.0mmol/L (200mg/dL).¹

Hyperglycaemia is a diagnostic feature of Diabetes Mellitus (Types 1 and 2). Acute hyperglycaemia is known to alter mood state and impairs cognitive performance in patients with diabetes mellitus.^{2,3} Patients with diabetes mellitus experiencing ketoacidosis or hypoglycaemia have also been shown to experience delirium.⁴⁻⁶

The literature related to the occurrence and management of mania associated with hyperglycaemia is limited. Through this case report, author present an interesting case of acute hyperglycaemia associated with secondary mania.

CASE REPORT

A 60 years old gentleman hailing from an urban background presented to the psychiatry OPD with complaints of disinhibited behaviour, sleep disturbance, increased activity and increased talk since 4 days. The symptoms were abrupt in onset and progressive in nature. There was no history suggestive of over religiosity, over familiarity, overspending or overgrooming. The patient had no history of any thought interference, substance use, depressive symptoms or anxiety symptoms. There was also no history suggestive of bowel or bladder incontinence, memory impairment, gait disturbance, head injury, fever, seizures or thyroid dysfunction. However, he was a known case of Type 1 Diabetes Mellitus since 10 years. There was no past history or family history of psychiatry illness reported.

The above symptoms were noticed to have occurred after poor adherence to insulin therapy. The onset of the manic symptoms had a temporal correlation with poor

adherence to insulin therapy and a rise in fasting blood glucose levels from normal range to 280mg/dL. During the episode, his fasting blood glucose levels were in the range of 280 to 400mg/dL and post-prandial blood glucose levels were around 360mg/dL.

On examination, the patient was found to be alert and adequately groomed. Rapport was established easily. Patient was noticed to have increased psychomotor activity; talk was increased in tone and volume and decreased reaction time – but it was relevant and coherent and there was excessive spontaneity. Mood was reported to be happy and an elated affect was observed. No perceptual disturbances were elicited. Cognitive functions were found to be within normal limits with the exception of impaired judgement. His insight was Grade 0. No focal neurological deficits elicited. There were no other localizing or lateralizing signs. Examination of other systems were within normal limits. All other lab investigations, including those for ketoacidosis, were within normal ranges. Magnetic resonance imaging (MRI) of his brain did not reveal any abnormality.

A reference was given to the General Medicine department for the management of blood glucose levels. Management consisted of the use of insulin to normalize the blood glucose levels (appropriate dosing on a 7-point sliding insulin scale) along with Tab. Clonazepam 0.5 mg/day. The patient's blood sugar normalized, and the mood symptoms also resolved within one week. Tab clonazepam was gradually tapered and stopped within 2 weeks and patient was psychoeducated regarding the need for strict adherence to insulin therapy.

DISCUSSION

It's well known that psychiatric symptoms occurring in association with hypoglycaemia can range from delirium and confusional states to psychosis.⁶⁻⁸ The co-occurrence of diabetes and depression has been established in clinical as well as general population studies.⁹ This co-occurrence is associated with increased impairment in functioning as well as mortality.¹⁰ The prevalence of diabetes among BPAD patients has been found to be increased (in hospital based studies) or nearly equal (in epidemiological surveys) to that observed in the general population.^{11,12}

This case report aims to highlight the presentation of a manic episode in a state of hyperglycaemia which is a lesser known occurrence due to the unavailability of adequate research and literature. The exact mechanism of occurrence of manic episode during hyperglycaemia is not known.

CONCLUSION

This case report seeks to emphasize the need for a detailed evaluation in a patient presenting with sudden

onset of behavioural symptoms and to consider a possibility of organic psychiatric disorders in such patients. It also implies justifiable consultation liaison psychiatry in other specialty fields like Medicine and Neurology. Also, in view of the paucity of available literature, the authors emphasize on the need for further research in the cause, occurrence and management of mania in hyperglycemia.

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