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HYPOGLYCEMIA PRESENTING AS HEMIPARESIS: A RARE CASE REPORT

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ABSTRACT Hypoglycaemia is a potentially dangerous condition, whereby blood glucose falls to abnormally low level. If left untreated, it may lead to various grave sequelae and even death. Apart from starvation, sepsis, liver diseases, hypoglycaemia is encountered in patients of diabetes mellitus and most of the times it is iatrogenic. Confusion, palpitations, sweating, headache, irritability, restlessness, dizziness and increased or decreased heart rate and loss of consciousness can be commonly encountered in hypoglycaemia but hemiparesis (mimicking stroke) is relatively rare. We present a case of an elderly diabetic female developing sudden onset hemiparesis and slurring of speech secondary to hypoglycaemia. There was a dramatic improvement in all her signs and symptoms within minutes of administering 25% intravenous dextrose.

KEYWORDS :

INTRODUCTION

The American Diabetes Association and European Association for the study of Diabetes define hypoglycaemia as blood glucose level <70 mg/dl.1 The symptoms of hypoglycaemia can be divided into two broad categories namely autonomic symptoms and neuroglycopenic symptoms. The risk of hypoglycaemia in type 2 diabetic patients taking anti-diabetic agents may range 45 to 75 %.2 The risk of hypoglycaemia is more in patients taking insulin.

Case report

Our patient was a 74 yr old female with a history of loose stools and loss of appetite for the last 21 days. However, what concerned the patient the most was generalised weakness that had increased for the last one day. There was no history of fever, increased frequency of urination, burning micturition, vomiting, and pain abdomen. No history of any other complication of type 2 diabetes was present. She was diagnosed with type two diabetes 32 years back and since then she was on metformin (1 gm/d) and glimepride(2 mg/d) in two divided doses. She was also hypertensive. Her entire blood biochemistry workup was normal with an RBS of 101 mg per dl. She was put on replacement fluids and was allowed orally and her medications were continued. On day three of admission she complained of slurring of speech, was unable to move her right arm and leg for the last four hours. Her vitals were stable and her blood pressure was 140/90 mmhg. Her body temperature was normal. Her blood sugar recorded at that time was 40 mg/dl. On examination her GCS was 13/15, she had a slurred speech, her cranial nerve examination was normal. Power on left shoulder, elbow, and wrist joint was 2/5 while the reflexes were present bilaterally symmetrical. In the lower limb her power was again 2/5 at all joints and deep tendon reflexes were present and symmetrical. Sensory examination couldn't be done. Rest of systemic examination was normal. She was immediately given 100 ml of twenty five percent dextrose. Within next few minutes we could see the patient sitting upright and moving both her arm and leg. Her CNS was re-examined and she had her power regained to 4/5 after glucose administration.

Her oral hypoglycaemic drugs were discontinued immediately. We got an entire workup for end organ damage, which was normal except that she had deranged serum creatinine value of 2.08 mg/dl. Her HbA1C was 6.9 %.She was also found to be anaemic with a haemoglobin level of 7.2 g/dl. Her diarrhoea settled in next 48 hrs and there was no episode of hypoglycaemia during hospital stay. Therefore, she was discharged with a follow up plan and counselling regarding sick days and regular sugar monitoring at home.

DISCUSSION

Hypoglycemia is a known complication of anti- diabetic agents. It is a limiting factor in achieving an effective glycemic control in a diabetic agent. There are various risk factors in developing hypoglycaemia in a diabetic patient. Old age and long duration of diabetes are amongst many other risk factors.3 Our patient developed hypoglycaemia probably because she had a poor oral intake while she continued her oral hypoglycemics. Also she had diabetic nephropathy as indicated by her creatinine levels which further could decrease the excretion of glimepride and metformin through kidneys. These hypoglycemics were discontinued in our patient.

Hemiparesis is a rare sign of hypoglycaemia. Various mechanisms for development of hemiparesis are largely unclear. Few proposed mechanisms are cytotoxic edema in brain, shrinkage of extracellular space, and failure of ionic pumps of cell membrane after energy depletion.4

CONCLUSION

Hypoglycaemic hemiplegia is a mimicker of cerebrovascular disease. Hemiparesis in hypoglycaemia is rare (4.2%). Most of the times it is right sided (66%). Therefore, those presenting with a stroke like picture must be screened for hypoglycaemia. Especially diabetic patients, who already have co-morbidities like hypertension which make us overlook a simply treatable cause like hypoglycaemia.

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