

# Flatbush Diabetes-Ketosis Prone a Typical Diabetes Mellitus: A Case Report

Dr. Puppala Santosh<sup>1</sup>, Dr. Ramireddy Veerareddy<sup>2</sup>, Dr. Kutumbaka Surya Vamshi<sup>3</sup>

<sup>1</sup>Final Year Post Graduate, NRI Medical College, Chinna Kakani, Andhra Pradesh, India

<sup>2</sup>Final Year Post Graduate, NRI Medical College, Chinna Kakani, Andhra Pradesh, India

<sup>3</sup>Final Year Post Graduate, NRI Medical College, Chinna Kakani, Andhra Pradesh, India

**Abstract:** *This report is mainly based on the recent economic development in recently, divided into two sections. The Nigeria how to development in recently, As Africa's oil production, is the richest countries, China and more countries need oil and oil cooperation in Nigeria, on the other hand, the Chinese government provides the loan conditions to improve transport infrastructure in Nigeria. The other part is focused on the analysis of foreign direct investment and globalization in Nigeria potential aspects of economic development, oil prices falling, Nigeria must constantly development of other industries, to support a sustainable development, to manufacturing for potential development, will attract more foreign investment, also can have more resources to develop economic foundation, improve the employment rate and increase the economic income, on the development of these opinions are given. Under the social ethics according to polygamy don't respect for women's rights, and government corruption leads to poor people without basic social medical education condition, this is the need to improve in Nigeria, Suggestions are given.*

**Keywords:** Potential Economics, International Business

## 1. Background

Diabetes Mellitus was a metabolic disease associated with elevated levels of the blood glucose. The word was derived from greek which means passing sweet urine. These patients generally presents with triad of polyuria, polyphagia and polydypsia. It was initially classified as Insulin dependent and non insulin dependent but later the classification was changed. Now it was classified as Type 1 diabetes, type 2 diabetes, Pancreatic diabetes, Maturity Onset diabetes in Young (MODY), Latent autoimmune diabetes of Adult, steroid induced diabetes. Type 1 diabetes which has autoimmune etiology presents most commonly as diabetic ketoacidosis in young individuals and responds only to insulin and Type 2 diabetes presents in middle aged to elderly individuals with insulin resistance initially and later lands into insulin deficiency eventually that has good response to ADAs.<sup>1</sup>

This case study deals with young female who presented with diabetic ketoacidosis but responded to ADAs and diagnosed as Ketosis Prone Type 2 diabetes mellitus.

## 2. Case Presentation

31 year old female with recurrent pain abdomen since 3 months diffuse type with vomiting, weight loss and hair loss visited to emergency room with complaints of severe dyspnea of grade IV with no wheeze, orthopnea and pedal oedema and Abdominal distension and pain with not passing stools since morning and 5 episodes of bilious vomitings. Her vitals at presentation was 110/80mmHg of blood pressure, pulse rate was 122/min, and oxygen saturation was 99% on room air. On examination she was diaphoretic, with severe tachypnea and no audible wheeze. Her chest has equal air entry with no adventitious sounds and her cardiovascular system turned out to be normal. She was not pale or icteric. No signs of peripheral oedema. Her capillary

blood glucose showed high values (>599). An ECG and ABG were advised. ECG showed sinus tachycardia and ABG showed ph of 6.99, pCO<sub>2</sub> of 7 with no derived values of bicarbonate. Her bedside urine ketones tested positive with dip stick (3+). She immediately started on IV fluids and subsequently managed as DKA according to protocols. Her HbA1C was 12%. She has negative family history for diabetes. She was mother of two children and her both pregnancies were uneventful. She has regular menstrual cycles. CECT abdomen was done which was normal. Her C-peptide levels were within normal limits. She was started on Insulin+ regimen with a basal insulin, Lantus, of 15 units at night subcutaneously and ADA of vildagliptin+metformin 50/1000 fdc tablet per oral twice daily. She was asked to review after 2 weeks. In these two weeks she was not developed. DKA and her FBS was 121 and PPBS was 202 and Urine ketones were negative. She was dose adjusted and asked to review after 1 month.

## 3. Discussion

New entity of diabetes was observed in Asians and non Caucasians where type 2 diabetes presents as diabetic ketoacidosis but responds with ADAs and it was first observed in 1980 and then defined as Flatbush diabetes later changed the nomenclature to Ketosis Prone type 2 Diabetes mellitus. It presents as acute hyperglycaemia with ketoacidosis in a previously unknown diabetes patients which was mores similar presentation of type 1 diabetes mellitus but the difference was the therapy where these individuals unlike type 1 they respond to oral hypoglycaemic agents. Another difference observed in these individuals is release of insulin for non hyperglycaemic stimulus (glucagon and arginine) which was not observed in type 1 individuals. Ketones which were synthesised by hepatocytes and utilised by the peripheral tissues, are the main reason for acidosis in both type 1 and KPD. But it was the reduced utilisation of the peripheral tissues of the

ketones rather than the increased synthesis in KPD2.

#### 4. Conclusion

Our report sheds light on the typicality of presentation and summarizes the main diagnostic features of this rare form of diabetes which has increased reports in Chinese, South Asians. Increased awareness of this entity can facilitate appropriate diagnosis and management. It also helps in pharmacological therapy of the patient as it was observed that sulphonyl ureas has great remission and some individual shown good glycemic control with dietary adjustments and also helps in conscious prescription of SGLT2 inhibitors which was being increasing advised due it renal and cardiac protective effects but has a complication of ketoacidosis even in euglycemic state.

#### References

- [1] Sapra A, Bhandari P. Diabetes Mellitus. [Updated 2022 Jun 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK551501/>
- [2] Lebovitz HE, Banerji MA. Ketosis-Prone Diabetes (Flatbush Diabetes): an Emerging Worldwide Clinically Important Entity. *Curr Diab Rep.* 2018 Oct 2; 18 (11): 120. doi: 10.1007/s11892-018-1075-4. PMID: 30280274; PMCID: PMC6182625.