

Severe Diabetic Ketoacidosis in a Newly Diagnosed Child with Type 2 Diabetes Mellitus: A Case Report

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Background: Diabetic ketoacidosis (DKA) is an acute complication of both type 1 and type 2 diabetes mellitus (DM). DKA is characterized by the presence of hyperglycemia, ketosis, ketonuria, and metabolic acidosis. Cerebral edema is a rare but rather a serious complication of DKA.

Case Presentation: An obese 12-year-old, Egyptian boy, previously medically free, presented to the emergency room (ER) of King Abdulaziz university hospital, with two weeks' histories of dizziness, shortness of breath, polyuria, polydipsia & nocturia. His symptoms were deteriorating with a change in sensorial and cognitive functions at the time of presentation. He was diagnosed with type 2 DM based upon clinical background, namely the presence of obesity (weight +7.57 Standard Deviation Score (SDS), height +1.4 SDS, and body mass index (BMI) of 34.77 kg/m² (+3.97 SDS) together with the presence of Acanthosis nigricans and biochemically based on, normal level of serum insulin, normal serum level of connecting peptide and negative autoantibodies. He was presented with severe DKA, based on clinical and laboratory criteria. During the first 12 h of hospitalization, the patient has developed cerebral edema based upon clinical and radiological bases with the requirement of intensive therapeutically managements with final complete clinical, biochemical and radiological recovery. The patient was discharged home on oral metformin therapy after gradual weaning from insulin therapy, which was needed initially during his acute presentation. We aimed to present a rare presentation of severe DKA with cerebral edema in a child with Type 2 DM.

Conclusion: Despite type 1 DM is the commonest type of diabetes in children, pediatricians should be aware of other types of diabetes, particularly type 2, as the prevalence of obesity in children is increasing. Children with type 2 DM are also prone to develop DKA, thus proper and rapid investigations to diagnose DKA in suspected patients are mandatory. Those patients are also at risk to develop cerebral edema, thus proper monitoring for neurological symptoms during the management of DKA is crucial.

Biography:

Mohammed AlAgha is a senior medical student at King Abdulaziz University, Jeddah, Saudi Arabia. Currently he is in the internship year and he is enjoying his last eleven months left for him before graduation. During his 6 years in medical school, he had an outstanding performance, and has maintained his position at the top of the dean's list for the top ten students. He has started his journey of research by two researches, and has previously presented one of them in a conference held in Jeddah, 2016.