

This case study details the diagnosis and management of 10-year-old Emma Mason's newly diagnosed type 1 diabetes mellitus (T1DM). Admitted with acute hyperglycemia (724 mg/dL) after fainting at softball practice, Emma exhibited classic symptoms: polyuria, polydipsia, and recent weight loss (from 82 lbs to 69 lbs). Laboratory results confirmed T1DM, showing elevated HbA1c (14.6%), positive GAD65 and IA-2 antibodies, and low C-peptide. Treatment involved intravenous insulin, electrolyte correction, and dietary management. The case study analyzes Emma's medical history, physical examination, laboratory data, and insulin regimen. It also explores the pathophysiology of T1DM, the metabolic events leading to her symptoms, and the management of DKA (although Emma was not in DKA on admission). The case concludes with questions focusing on nutrition therapy, including calculating energy and protein requirements, developing a nutrition care plan with appropriate carbohydrate counting, adjusting insulin doses based on blood glucose levels (using ICR and the 1800 rule), and evaluating Emma's progress at a follow-up visit, considering her exercise regimen and potential for hypoglycemia. Her family history is notable for hypertension, hyperthyroidism, and celiac disease in relatives.