hyperglycemia.

Glycosuria by itself is not diagnostic of diabetes. Other sugars, such as galactose, can produce a positive result with certain test strips, and a mild degree of glycosuria can be caused by other conditions, such as infection, trauma, emotional or physical stress, hyperalimentation, and some renal or endocrine diseases.

DM is diagnosed based upon any of the following four abnormal glucose metabolites: (1) 8-hour fasting blood glucose level of 126 mg/dl or more, (2) a random blood glucose value of 200 mg/dl or more accompanied by classic signs of diabetes, (3) an oral glucose tolerance test (OGTT) finding of 200 mg/dl or more in the 2-hour sample, and (4) hemoglobin A1C of 6.5% or more is almost certain to indicate diabetes (Laffel and Svoren, 2015). Postprandial blood glucose determinations and the traditional OGTTs have yielded low detection rates in children and are not usually necessary for establishing a diagnosis. Serum insulin levels may be normal or moderately elevated at the onset of diabetes; delayed insulin response to glucose indicates impaired glucose tolerance.

Ketoacidosis must be differentiated from other causes of acidosis or coma, including hypoglycemia, uremia, gastroenteritis with metabolic acidosis, salicylate intoxication encephalitis, and other intracranial lesions. DKA is a state of relative insulin insufficiency and may include the presence of hyperglycemia (blood glucose level ≥200 mg/dl), ketonemia (strongly positive), acidosis (pH <7.30 and bicarbonate <15 mmol/L), glycosuria, and ketonuria (Wolsdorf, Craig, Daneman, et al, 2009). Tests used to determine glycosuria and ketonuria are the glucose oxidase tapes (Keto-Diastix).

Therapeutic Management

The management of the child with type 1 DM consists of a multi-disciplinary approach involving the family; the child (when appropriate); and professionals, including a pediatric endocrinologist, diabetes nurse educator, nutritionist, and exercise physiologist. Often psychological support from a mental health professional is also needed. Communication among the team members is essential and extends to other individuals in the child's life, such as teachers, school nurse, school guidance counselor, and coach.

The definitive treatment is replacement of insulin that the child is