<table>
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<tr>
<th>Suggestive history and physical findings</th>
<th>Initial laboratory and/or radiologic work-up can include:</th>
<th>When to refer</th>
<th>Items useful for consultation</th>
<th>Additional information</th>
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<tr>
<td><strong>Symptoms:</strong> Polyuria, nocturia, enuresis, increased thirst, increased appetite, weight loss, fatigue. <em>Vomiting, Rapid/deep breathing, Abdominal pain, lethargy may suggest DKA</em>*</td>
<td><strong>Blood tests:</strong> • Random blood glucose</td>
<td><strong>Urgent:</strong> All cases of diabetes, defined as fasting blood glucose &gt; 126 mg/dl, random blood glucose &gt; 200 mg/dl or 2 hour post prandial glucose &gt; 200 mg/dl after glucose load of 1 gm/ kg, or HbA1c &gt; 6.5% should be immediately referred to a multidisciplinary diabetes center or to pediatric endocrinologist.</td>
<td>Previous growth data/growth charts</td>
<td><strong>Additional Information</strong></td>
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<td><strong>Past history:</strong> Other autoimmune diseases like hypothyroidism</td>
<td><strong>Urine tests:</strong> • Urine glucose and ketones</td>
<td><strong>Emergent:</strong> <strong>If child is:</strong> - Ill appearing - Has ketones in urine or - Suspected to have diabetic ketoacidosis, They should be referred emergently to the nearest emergency department for stabilization, initiation</td>
<td>Pertinent medical records</td>
<td><strong>Type 1 Diabetes: A Guide for Families</strong></td>
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<td><strong>Family history:</strong> History of diabetes (not as likely as Type 2) and other autoimmune disorders</td>
<td><strong>Other tests to consider after consultation with Pediatric Endocrinologist:</strong> • Fasting blood glucose • CMP • Hemoglobin A1c • Complete blood count • Oral glucose tolerance test • c-peptide • Diabetes antibodies: islet cell, IA-2, insulin, GAD-65, ZnT8</td>
<td></td>
<td>Recent laboratory and radiologic studies</td>
<td><strong>References</strong></td>
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</table>
Differential diagnosis for diabetes

- Type 1 diabetes (T1DM),
- Type 2 diabetes (T2DM)
- Chemical/medication induced diabetes
- Stress induced hyperglycemia
- Monogenic onset diabetes of young / Maturity onset diabetes of Young (MODY)

Additional Information:

Laboratory Abnormalities:

- Diabetes is defined as fasting blood glucose ≥ 126 mg/dl, 2 hours post prandial glucose ≥ 200 mg/dl after glucose load of 1 gm/kg (maximum dose: 75 gm), HbA1c ≥ 6.5%, or random blood glucose ≥ 200 mg/dl in patient with classic symptoms of hyperglycemia.
  - In the absence of unequivocal hyperglycemia, result should be repeated.
- Simultaneous c-peptide level is inappropriately low.
Most commercial laboratories may have the assays to test for some/most of the autoantibodies accurately. Should be done after discussion with the endocrinologist.

- Electrolyte abnormalities are common and may include pseudo-hyponatremia (secondary to blood glucose elevation), metabolic acidosis, elevated blood urea nitrogen and creatinine (secondary to dehydration), and hypokalemia or hypophosphatemia (total body depletion)
- Other tests to screen for simultaneous autoimmune disorders: Serum TSH, free T4, T3, and anti-thyroid antibodies (thyroid peroxidase antibody, thyroglobulin antibodies), tissue transglutaminase IgA antibodies, total IgA concentration

Diabetes care involves close supervision, intensive education and frequent monitoring. It involves:

- Insulin administration by multiple daily subcutaneous injection or insulin pump.
  - Rapid acting analogs (Lispro, Aspart, Glulisine)
  - Long acting insulin (NPH),
  - Basal insulin analogues (Glargine, Detemir)
- Sulfonylurea, gliptins, gliflozins, and Metformin are not indicated for individuals with T1DM
- Glycemic control is monitored with multiple daily self-monitoring of blood glucose (SMBG), continuous subcutaneous glucose monitoring system and quarterly hemoglobin A1c.
- All patients with DKA should be admitted to in-patient or ICU set up and treated with IV fluids, IV insulin infusion, frequent blood glucose, and electrolyte monitoring.
- Patients and their care givers should receive diabetes self-management education including medical nutrition therapy, self-monitoring of blood glucose, insulin administration, need for monitoring of chronic complication, management of lipid abnormality, and hypertension.

**Suggested References and Additional Reading:**


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