Clinical history
- polyuria
- polydipsia
- weight loss
- vomiting
- abdominal pain
- confusion

Clinical signs
- dehydration and/or hemodynamic instability
- deep sighing respiration
- ketotic breath

Biochemical investigation
- ketones in urine or capillary blood
- blood glucose
- blood gases and electrolytes
- investigate infection if indicated

DKA confirmed
- Hyperglycemia (blood glucose > 200 mg/dl)
- Venous pH < 7.3 or bicarbonate < 15 mmol/L
- Ketonemia and/or ketonuria.

Clinical signs
- dehydration and/or hemodynamic instability
- deep sighing respiration
- ketotic breath

Biochemical investigation
- ketones in urine or capillary blood
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Diagnostic approach
- DKA confirmed
- Hyperglycemia (blood glucose > 200 mg/dl)
- Venous pH < 7.3 or bicarbonate < 15 mmol/L
- Ketonemia and/or ketonuria.

After initial hydration:
- Start insulin therapy
  - Continuous IV regular insulin (0.1 U/kg/hour)
  - Start potassium replacement IF diuresis present and initial K< 5.5 mEq/L, 20-40 mEq/L of potassium in the hydration fluid, at a maximum rate of 0.5 mEq/kg/hour
- Monitor:
  - blood glucose hourly
  - fluids input and output hourly
  - neurologic status at least hourly
  - ketonuria
  - electrolytes and blood gases every 2 hours
- No improvement
- Reassess:
  - fluid replacement
  - insulin dose and infusion
  - consider sepsis
- Improvement (clinically well, tolerating oral fluids)
- Transition to SC insulin
  - replace IV regular insulin by intermittent subcutaneous regular insulin administration, initiated 1-2 hours before interrupting the IV regular insulin infusion
- No improvement
- Neurologic deterioration (headache, irritability, increased drowsiness, urine incontinence, specific neurological signs and slowing heart rate)
- Cerebral edema suspicion (exclude hypoglycemia)
  - mannitol 0.5-1 g/kg IV, in 20 minutes, repeated if no response within 30 minutes and 2 hours
  - reduce fluid infusion by 1/3
  - elevate head of the bed
  - move to ICU
  - cranial image AFTER patient stabilised