

**Patient #001**

**Chief Complaint:** This 56 year old black male presented with polyuria and polydipsia.

**History of Present Illness:** The patient was in his usual state of health until 2 weeks prior to admission, when he developed frequent urination of normal amounts of urine. He also began urinating 3 to 4 times per night. He experienced increased thirst, and found himself drinking at least one gallon of water per day. His mouth became dry, and he reported having to brush his teeth 4 times per day because of a fruity mouth odor. He developed nausea and vomiting, generalized weakness, and lost 25 lb.. He denied dysuria or hematuria. He also denied fever, chills, excessive sweating, headache, visual disturbances, or paresthesias.

**Past Medical History:** Chronic obstructive pulmonary disease diagnosed 7 years prior to admission. Congestive heart failure diagnosed 1 year prior. Glaucoma in the right eye for 16 years.

**Medications:** Digoxin, furosemide, potassium, nitroglycerine patch, theophylline, terbutaline, prednisone, pilocarpine eye drops.

**Allergies:** none known.

**Family History:** His father died at age 73 from a myocardial infarction. His mother had glaucoma. Three siblings and seven children were alive and well.

**Social History:** He is a former dry cleaner who retired 9 years ago when his vision became poor. He is separated from his wife, and lives alone. He smoked 1 1/2 packs of cigarettes a day for 30 years, but quit 5 years ago. He does not drink alcohol.

**Physical Examination:** Well developed, well nourished black male in no acute distress. BP 130/84; pulse 100; respirations 20; temperature 98.6°F (37°C).

The head was normocephalic and atraumatic. The facial features were coarse. The conjunctivae were pink. The sclerae were anicteric. There were 2 peripheral iridectomies in the right eye. The fundi were not well visualized. He had a prominent jaw, and a large tongue; his voice was deep. The neck was supple, without adenopathy or jugular venous distention. There was no thyromegaly. The lungs were clear. Cardiac examination revealed an apical impulse in the 6th intercostal space in the midclavicular line. S<sub>1</sub> and S<sub>2</sub> were normal, and there was a II/VI systolic

ejection murmur at the left sternal border. The abdomen was soft, with normoactive bowel sounds. There was no hepatosplenomegaly or masses. Rectal examination showed a normal size prostate and no masses; the stool was guaiac negative. The extremities showed no cyanosis, clubbing, or edema; Tinnel's and Phalen's signs were negative. Neurologic examination was normal.

**Laboratory Data:**

|                    |                |        | <i>Normal</i>                 |
|--------------------|----------------|--------|-------------------------------|
| <b>CBC</b>         | Hct            | 42.6   | 42-52%                        |
|                    | Hgb            | 14.2   | 14.0-18.0g/dl.                |
|                    | WBC            | 5.0    | 4.8-10.8 X 10 <sup>9</sup> /L |
|                    | differential   | normal |                               |
|                    | platelet count | 350    | 150-400 X 10 <sup>9</sup> /l  |
| <b>Chemistries</b> | sodium         | 132    | 135-149 mmol/l                |
|                    | potassium      | 4.8    | 3.5-5.3 mmol/l                |
|                    | chloride       | 97     | 98-108 mmol/l                 |
|                    | CO2            | 18.1   | 24-32 mmol/l                  |
|                    | creatinine     | 1.6    | 0.5-1.5 mg/dl                 |
|                    | BUN            | 10     | 6-20 mg/dl                    |
|                    | glucose        | 421    | 70-110 mg/dl                  |

**Urinalysis:** 3+ glucose, 3+ acetone, Microscopic examination showed no cells or bacteria.

**Arterial blood gas (room air):** pH 7.30, pCO<sub>2</sub> 31, pO<sub>2</sub> 72 (nl=80-90).

**EKG:** sinus tachycardia, but otherwise normal.

**Chest X-ray:** normal heart and lungs.

A diagnosis of diabetic ketoacidosis was made, and intravenous fluid and insulin therapy were begun.