

BACKGROUND: In spite of many advances in the management of diabetes in the last 25 years, the mortality associated with diabetic ketoacidosis (DKA) remains high, especially in the developing countries. The mortality appears greatest in the first 24-48 hours of their treatment. Most of the previous studies on DKA focused on children and the precipitating factors thereof but not particularly on clinical predictors of outcomes. **OBJECTIVE:** To determine the clinico-laboratory predictors of outcomes of patients hospitalized with diabetic ketoacidosis who were undergoing treatment. **DESIGN:** Cross-sectional descriptive study. **SETTING:** The accident and emergency department and medical wards of the Kenyatta National Hospital. **SUBJECTS:** Fifty one patients hospitalized with diabetic ketoacidosis over a nine month period were evaluated clinically and by laboratory tests. They were managed in the standard way with insulin, intravenous fluids and appropriate supportive care. **Main outcome measures:** Serial assays of serum electrolytes, glucose and blood pH, HbA1c and clinical outcome of either discharge home or death. **RESULTS:** Of the 51 patients enrolled, 47 were included in the final analysis. Fourteen (29.8%) patients died, and the deaths occurred within less than 48 hours of hospitalization and treatment. Of the patients who died, all (100%) had altered level of consciousness at hospitalization, 71.4% had abnormal renal functions, 64.3% were newly diagnosed and an equal proportion of 64.3% were females. The alteration in the level of consciousness was significantly associated with systolic hypotension and severe metabolic acidosis, ($p < 0.001$). Patients with altered level of consciousness also had poorer renal function. **CONCLUSION:** Apparently DKA still carries high mortality during treatment in hospital. Altered level of consciousness, which is an obvious and easily discernible clinical sign, was a major predictor of mortality in our study patients. The majority of patients with altered level of consciousness also had systolic hypotension, severe metabolic acidosis and impaired renal function. Even where and when detailed laboratory evaluation is elusive, clinical signs, especially altered level of consciousness and systolic hypotension are very important markers of severity of DKA that may be associated with unfavourable outcomes. Further studies are necessary to establish why DKA still carries high mortality in the patients who are already receiving treatment in hospitals in developing countries.