

# **Diabetic ketoacidosis: clinical presentation and precipitating factors at Kenyatta National Hospital, Nairobi.**

## **Abstract**

### **OBJECTIVE:**

To determine the clinico-laboratory features and precipitating factors of diabetic ketoacidosis (DKA) at Kenyatta National Hospital (KNH).

### **DESIGN:**

Prospective cross-sectional study.

### **SETTING:**

Inpatient medical and surgical wards of KNH.

### **SUBJECTS:**

Adult patients aged 12 years and above with known or previously unknown diabetes hospitalised with a diagnosis of diabetic ketoacidosis.

### **RESULTS:**

Over a nine month period, 48 patients had DKA out of 648 diabetic patients hospitalised within the period, one died before full evaluation. Mean (SD) age was 37 (18.12) years for males, 29.9 (14.3) for females, range of 12 to 77 years. Half of the patients were newly diagnosed. More than 90% had HbA1c > 8%, only three patients had HbA1c of 7-8.0%. More than 90% had altered level of consciousness, with almost quarter in coma, 36% had systolic hypotension, almost 75% had moderate to severe dehydration. Blunted level of consciousness was significantly associated with severe dehydration and metabolic acidosis. Over 65% patients had leucocytosis but most (55%) of them did not have overt infection. Amongst the precipitating factors, 34% had missed insulin, 23.4% had overt infection and only 6.4% had both infection and missed insulin injections. Infection sites included respiratory, genito-urinary and septicaemia. Almost thirty (29.8%) percent of the study subjects died within 48 hours of hospitalisation.

### **CONCLUSION:**

Diabetic ketoacidosis occurred in about 8% of the hospitalised diabetic patients. It was a major cause of morbidity and mortality. The main precipitant factors of DKA were infections and missed insulin injections. These factors are preventable in order to improve outcomes in the diabetic patients who complicate to DKA.