

# Thirty day mortality and related variables in open heart patients at the Kenyatta National Hospital, Nairobi.

## Abstract:

To determine the thirty-day mortality of open-heart patients at the Kenyatta National Hospital in Nairobi from June 1973 to October 2000 and; to look at likely variables related to mortality.

DESIGN: A retrospective analysis of data from the unit database. Data on this database were collected prospectively from September 1997 to the time of study. Data in respect of the period prior to this were collected retrospectively from patient files, ward and theatre records.

SETTING: Kenyatta National Hospital (KNH), Nairobi. PATIENTS: A total of 563 open-heart patients operated at the KNH were included in the study.

RESULTS: The thirty-day mortality rate calculated at 17.4% for the study period compared to a hospital mortality rate of 16.9%.

Surgical repair for complex congenital pathology, surgery on patients with a left atrial (LA) dimension or a left ventricular end systolic dimension (LVESD) greater than 5 cm or/and a cross clamp time greater than 60 minutes all had a significantly greater risk of mortality on bivariate analysis. This is compared to surgery for simple hole in the heart, LA and LVESD dimensions less than 5 cm and cross clamp times less than 60 minutes ( $p < 0.05$ ). The increased risk of mortality with these variables was 3.33, 3.95, 3.18 and 1.8 times greater than their counterparts, respectively. For patients having surgery for an acquired pathology, only a cross clamp time greater than 60 minutes and a left atrial size greater than 5 cm were independent risk factors for thirty day mortality using logistic regression analysis. For patients having surgery for correction of a congenital defect, only a cross clamp time of more than 60 minutes was an independent predictor of mortality ( $p < 0.05$ ). CONCLUSIONS: The higher mortality rate is amongst others, probably related to the late presentation of our patients for surgery when their myocardial function is below the optimum for surgery. There is a need to bring down the mortality through more stringent patient selection, preoperative preparation and reduction of surgical ischaemic times, however without depriving the patients in need of surgery.