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**FACTORS ASSOCIATED WITH MORTALITY FROM
HYPERTENSION IN PATIENTS ATTENDING MOI
TEACHING AND REFERRAL HOSPITAL**

BY

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ABSTRACT

Introduction: Like other deaths, mortality from hypertension is a product of multiple determinants acting at many levels. Unfortunately, it is unknown which group of factors contribute most to these deaths in our setting. The aim of this study was to assess the association of different risk factors and hypertension deaths at MTRH.

Methods: This was a retrospective study based on hospital data on demographic, socio-economic, environmental, health services, and medical factors associated with hypertension mortality between January 1998 and March 2004 for adults aged 30 and older. The main outcome measures were mortality occurrence within 24 hours, and within a week of hospital admission respectively. Stratified sampling technique was used, and data analyzed using SPSS-statistical package. Logistic regression models, ANOVA and Chi-square tests were used in analyses to determine possible association between mortality and respective independent factors.

Results: The proportion of male deaths was higher than that of the females ($p = 0.014$). Elderly patients and those without a positive family history of hypertension had a lower risk of dying within 24 hours of admission when compared with their counterparts. Adjusted for similar factors, current alcohol users were more likely to die than the ex-drinkers, just as were lower social class cases compared with their counterparts although the relationships were not significant at the 5% level. Cases with low blood pressure levels were more likely to die than those with severe levels of BP. Controlling for age, sex, time of review, and problem identification in a logistic model, it was found that the level of admission diastolic BP is a potential good predictor of mortality outcome within 24 hours of admission (OR = 0.915, 95% CI: 0.859 to 0.974, $p = 0.005$). Within a week of admission, previously treated hypertensives were more likely to die when compared with their non-treated counterparts. The risk of death for cases that were placed into the resuscitation room was more than 6 times that of cases admitted straight to the wards (OR = 6.341, 95% CI: 1.295 to 31.045, $p = 0.023$). Renal unit patients had a significantly higher risk of dying when compared with amenity ward patients (OR = 11.324, 95% CI: 1.065 to 120.452, $p = 0.044$), as did medical ward patients. Results indicated that the risk of death in the groups with pneumonia exceeded the same risk in the groups without this infection. Hypertensive heart failure cases had a higher risk of dying when compared with those with hypertensive heart and renal disease (OR = 7.002, 95% CI: 1.304 to 37.600, $p = 0.023$), as did hypertensive renal failure cases (OR = 13.097, 95% CI: 2.188 to 78.390, $p = 0.005$).

Conclusions: Hypertension mortality is the result of a complex web of risk factors, including younger age, male sex, and family history, low BP levels at admission, prior treatment, heart failure, renal impairment, pneumonia, and general medical wards. Our findings show that the interventions needed to prolong life and possibly reduce mortality are available, but reform initiatives are required to assist in formulating health policies and guide resources aimed at addressing the needs of the patients with hypertension and other cardiovascular risk factors.