

## **Prevalence of obesity among hypertensive patients seen in the Internal Medicine Department of IME-Kimpese Hospital, DR Congo**

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### **Abstract:**

**Background.** Obesity is an important risk factor for cardiovascular diseases and particularly in hypertensive patients. Its prevention and early treatment are indicated to prevent further complications. Data on obesity associated with hypertension in sub-Saharan Africa are scarce and the lack of literature on obesity in the province of Kongo-Central was the main motivation for this study.

**Aim:** To explore the association of obesity with hypertension and other associated risk factors.

**Methods:** In this retrospective descriptive study, data were collected from medical records for attended hypertensive patients from January to December 2014 in the Internal Medicine Department of the IME-Kimpese Hospital. This hospital is one of the biggest hospitals in the Kongo-Central province with a capacity of 400 beds. Kimpese is a city which is 220 km away in the west of Kinshasa, Democratic Republic of the Congo (DRC). Hypertension was defined as  $BP \geq 140/90$  mmHg or every patient under antihypertensive treatment regardless of the level of blood pressure. Obesity was defined as a BMI greater than or equal to  $30 \text{ kg/m}^2$ . All medical records with incomplete data were discarded. Pearson's chi-square test or Fischer's, Student's and Mann Withney's test were used to compare proportions, means and medians respectively. The adjusted OR was calculated using a 95% confidence interval.  $P < 0.05$  defined the significant threshold.

**Results:** Of the 903 patient records seen during the study period, 303 were diagnosed hypertensive (33.5%) and only 53 records were usable as they met the eligibility criteria. Of the selected patients, 64.2% were female and the mean age was  $58.8 \pm 11.7$  years. The median duration of hypertension was 3(2-4) years. Hypertension was associated with diabetes mellitus in 46% of cases. The overall incidence of obesity in

this population was 45.3%. Diabetes (adjusted OR 13.4 95% CI [1.86-96.10],  $p=0.010$ ), female sex (adjusted OR 16.7 95% CI [1.84-151.88],  $p=0.012$ ), and pulse pressure (adjusted OR 1.1 95% CI [1.02-1.18],  $p=0.016$ ) emerged as the major determinants of obesity.

**Conclusion:** Despite the limitations of this study due to the methodology used, the current study suggests that obesity is common in hypertensive patients and the association with gender, diabetes mellitus and pulse pressure has been found.