**TITLE PAGE**

**Title: The Association between Waist Circumference and Renal Insufficiency among Hypertensive Patients**

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**Type of contribution:** Original research results

**Running title:**

**Number of words in the abstract:**

**Number of words in the text:** x,xxx

**Number of tables:** x

**Number of figures:** x

**ABSTRACT**

**Background**: Hypertension is a global epidermis over 1.5 billion people worldwide suffer from high blood pressure. Renal insufficiency constitutes one of the main causes of morbidity, disability and mortality worldwide. Obesity, a major health problem reaching global epidermic proportions, is also associated with morbidity and mortality. The relationship of waist cercumference and renal insufficiency is somewhat controversial. While it is established that obesity increases the risk of hypertension, diabetes and dyslipidemia, it is not clear if excess waist circumference influences renal insufficiency risk independently.

**Objective:** To investigate the association between waist circumference and Renal insufficiency among hypertensive patients

**Methods**: A analytic study was conducted all information were collected from medical records of all patients diagnosed with Hypertension during 2012. The type of hypertension complications was based on Renal insufficiency was the main outcome of this study.

**Results:** In this study, 83.8% of hypertension patients had been renal insufficiency. The associated with abdominal waist circumference and renal insufficiency presented as odds ratio (OR) and 95%CI, It showed that WC (OR=0.80; 95%CI: 0.65 to 0.98; p-value=0.032), age group 40-59 years old (OR=3.22; 95%CI: 1.93 to 5.36; p-value<0.001), age group 60-79 years old (OR=11.58; 95%CI: 6.89 to 19.46; p-value<0.001), age group >80 years old (OR=19.14; 95%CI: 9.47 to 38.68; p-value<0.001),BMI group <18.5(OR=1.03; 95%CI: 0.88 to 1.21; p-value<0.001), BMI group >23.0(OR=0.94; 95%CI: 0.86 to 1.03; p-value<0.001) ,female(OR=0.72; 95%CI: 0.58 to 0.91; p-value=0.005), Hemoglobin(OR=1.29; 95%CI: 1.01 to 1.65; p-value=0.005), Others factors that were not significant factors, *p*>0.05.

**Conclusions**: The study found statistically significant association between abdominal waist circumference and renal insufficiency. Therefore, the abdominal waist circumference is one of factor that recognizing the early signs of hypertension with renal insufficiency and can help prevent this condition.

**Key words:** Renal insufficiency, abdominal waist circumference, cohort study