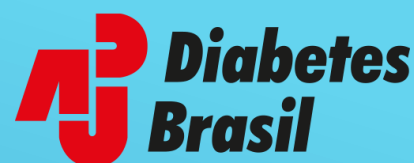


ASSESSMENT OF CHRONIC KIDNEY DISEASE RISK FACTORS IN A COMMUNITY SCREENING: OBESITY, HYPERTENSION, AND DIABETES IMPACT



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Background

Introduction: Chronic Kidney Disease (CKD) is a growing global health concern, often linked to diabetes, hypertension, and lifestyle factors like smoking. To better understand these relationships, a community screening was conducted during World Kidney Day, assessing anthropometric data, blood pressure (BP), blood glucose (BG), and creatinine levels.

Methodology:

Data were collected from participants using point-of-care devices for immediate assessment. The study focused on common CKD risk factors, including diabetes (DM), hypertension (SAH), obesity, smoking, and NSAID use. Statistical analyses were performed to evaluate the relationships between these factors and CKD markers such as glomerular filtration rate (GFR) and creatinine levels.

Results:

The study included individuals with an average age of 60.4 years, with 49.3% being female. The prevalence of obesity was 26.7%, SAH 47.1%, DM 29.7%, and smoking 8.2%. GFR averaged 66.3 mL/min/1.73m², with a mean creatinine level of 0.72 mg/dL. Significant correlations were found between GFR and BG ($p = 0.05$), and GFR and SAH ($p = 0.049$) (Table 1). The regression model highlighted urinary infections and frequent NSAID use as major factors associated with CKD, differing from literature expectations where DM and SAH are typically primary contributors.

Characteristic	Mean / Prevalence	Standard Deviation
Age (years)	60.39	13.85
Sex (Female)	49.31%	
Obesity (BMI > 29.9)	26.79%	
Hypertension (HAS)	47.10%	
Diabetes Mellitus (DM)	29.70%	
Smoking	8.20%	
Chronic Kidney Disease (CKD)	12.00%	
Urinary Tract Infection (UTI)	12.20%	
Kidney Stones (Nephrolithiasis)	19.10%	
Family History of CKD	18.30%	
Frequent NSAID Use	14.60%	
Knowledge of NSAIDs	82.50%	
Systolic Blood Pressure (mmHg)	122.25	18.93
Diastolic Blood Pressure (mmHg)	75.24	12.50
Blood Glucose (mg/dL)	112.25	49.14
Serum Creatinine (mg/dL)	0.72	0.68
Glomerular Filtration Rate (GFR, mL/min/1.73m ²)	66.35	20.72



Discussion:

The findings suggest a distinct pattern in this population, where NSAID use and urinary infections appear more influential in CKD development than recognized factors like DM and SAH. This deviation may be due to underreporting of conditions, variations in healthcare access, or regional differences in lifestyle and genetics. The correlation between obesity and increased BG also aligns with existing evidence on the impact of visceral fat on metabolic health.

Conclusion

The study highlights the importance of public health interventions addressing both traditional and emerging risk factors for CKD. Future research should explore these relationships further, considering larger, more diverse populations to validate the findings and guide effective prevention strategies.

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