

NEW DIMENSION SERIES

Sustainable Development Goals (SDGs) for Hypertension Zero in the era of Anthropocene.

CATEGORY B: HYPERTENSION AND DIVERSITY

Ramadan fasting and its relationship with cardiovascular and renal diseases

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An international task force of expert physicians established the Ramadan and Kidney Disease working group (RaK Initiative) to provide recommendations for chronic kidney disease (CKD) patients considering fasting during Ramadan.¹ This group aims to integrate existing evidence with expert insights, in collaboration with the Diabetes and Ramadan (DaR) International Alliance, to offer empirical guidelines for CKD patients.

Effect of Ramadan Fasting on Blood Pressure Control in Non-Renal Patients

Numerous studies have examined the impact of Ramadan fasting (RF) on blood pressure (BP) control among hypertensive patients. The consensus across these studies is that patients with controlled hypertension can safely fast during Ramadan, with many studies documenting improved BP control due to fasting.¹⁻⁴

Hypertension in CKD patients who fast during Ramadan:

The available literature is limited. Overall, the effects of RF on BP control in CKD patients appear to be generally favorable or neutral. However, the impact on kidney function remains inconclusive, necessitating further research.^{1,5,6}

Ramadan Fasting for Patients with Cardiovascular Diseases

Most stable cardiac patients, including those with heart failure, ischemic heart disease, and cardiac arrhythmia, generally tolerate fasting during Ramadan well. However, for CKD patients with cardiovascular diseases, the available data are limited, making it challenging to establish concrete recommendations. A thorough evaluation by both nephrologists and cardiologists is strongly recommended to determine the safety of Ramadan fasting for these patients.^{1,7}

Effect of RF on CKD Patients:

Several studies have investigated the impact of RF on patients with CKD. The majority did not identify significant differences in kidney function parameters between fasters and non-fasters during Ramadan or when patients were compared with themselves before and after RF. Some studies have suggested that RF might lead to moderate improvement in kidney function. However, a limited number of studies have reported worsening renal function in some patients with moderate to severe CKD during RF. The available data suggest a progressive increase in the risk of acute kidney injury (AKI) with CKD severity: Stages 1 and 2 show a low risk, stage 3 exhibits a moderate risk, while stages 4 and 5 pose a high risk.^{1,8-10}

Assessment

We recommend that all CKD patients contemplating RF consult their healthcare provider to evaluate personal risks and make decisions tailored to their unique medical conditions. Pre-Ramadan medical evaluations for CKD patients should encompass a detailed history, including past RF experiences, a physical exam, and a targeted lab panel. Based on the assessment, patients' risk of RF will be classified as low, moderate, or high, as outlined in the reference.¹

Conclusion

Studies in non-renal hypertensive patients generally indicate improved BP control due to Ramadan fasting, though some studies show no statistical difference. Favorable effects on cardiovascular risk factors were noted, and RF is considered safe for patients with mild to severe controlled hypertension. While RF appears safe for many patients with cardiovascular and renal diseases, individualized evaluation and careful monitoring are essential to ensure patient safety and well-being.

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