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Chronic kidney disease in hypertensive subjects ≥60 years treated in Primary Care☆

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ABSTRACT

Background: Hypertension (HT) is the second leading cause of kidney failure. In hypertensive patients with chronic kidney disease (CKD), blood pressure (BP) control is the most important intervention to minimise progression. For CKD diagnosis, standardised creatinine and estimated glomerular filtration rate (eGFR) testing by CKD-EPI is recommended.
Objectives: To describe the prevalence and factors associated with a moderate decrease in eGFR (by CKD-EPI) and BP control in subjects with HT.
Methods: Cross-sectional descriptive study in subjects ≥60 years included in the *SIDIAP plus* database with hypertension and standardised serum creatinine and BP tests in the last 2 years. Exclusion criteria: eGFR < 30, dialysis or kidney transplantation, prior cardiovascular disease, home care. Primary endpoint: eGFR by CKD-EPI formula. Covariates: demographic data, examination, cardiovascular risk factors, heart failure and auricular fibrillation diagnosis, and drugs (antihypertensive agents acting on renal function, antiplatelet and lipid lowering agents). BP control criteria: ≤130/80 mmHg in individuals with albuminuria, ≤140/90 in all other subjects.
Results: Prevalence of eGFR <60 = 18.8%. Associated factors: age, gender, heart failure, albumin/creatinine ratio, auricular fibrillation, smoking, dyslipidaemia, diabetes and obesity.

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BP control: 66.14 and 63.24% in eGFR ≥ 60 and eGFR < 60, respectively ($p < 0.05$). Exposure to drugs was higher in eGFR < 60.

Conclusion: One in 5 hypertensive patients without cardiovascular disease ≥60 years in primary care presented with a moderate decrease in eGFR. In addition to age and sex, albuminuria and heart failure were the main associated factors. Despite the increased exposure to drugs, BP control was lower in CKD.

Enfermedad renal crónica en individuos hipertensos ≥60 años atendidos en Atención Primaria

Palabras clave:
Enfermedad renal crónica
Hipertensión arterial
Atención Primaria
Prevalencia
Factores de riesgo

RESUMEN

Antecedentes: La hipertensión arterial (HTA) es la segunda causa de insuficiencia renal. En hipertensos con enfermedad renal crónica (ERC) el control de la presión arterial (PA) es la intervención más importante para minimizar la progresión. Para el diagnóstico de ERC se recomienda la determinación estandarizada de creatinina y filtrado glomerular estimado (FGe) según CKD-EPI.

Objetivos: Describir la prevalencia y los factores asociados a la disminución moderada del FGe (según CKD-EPI) y el control de PA en individuos con HTA.

Métodos: Estudio descriptivo transversal en individuos ≥60 años incluidos en la base de datos SIDIAP plus con HTA y registro de creatinina sérica estandarizada y PA en últimos 2 años. Criterios de exclusión: FGe < 30, diálisis o trasplante renal, enfermedad cardiovascular previa, atención domiciliaria. Variable principal: FGe según CKD-EPI. Covariables: datos demográficos, exploración, factores de riesgo cardiovascular, diagnósticos de insuficiencia cardiaca y fibrilación auricular y fármacos (antihipertensivos con acción sobre función renal, antiagregantes, hipolipidemiantes). Criterio de control de la PA: ≤130/80 mmHg en individuos con albuminuria, ≤140/90 en el resto.

Resultados: Prevalencia FGe < 60: 18,8%. Factores asociados: edad, sexo, insuficiencia cardiaca, cociente albúmina/creatinina, fibrilación auricular, hábito tabáquico, dislipidemia, diabetes y obesidad. Control de la PA: 66,14 y 63,24% en FGe ≥ 60 y FGe < 60 respectivamente ($p < 0,05$). La exposición a fármacos fue superior en FGe < 60.

Conclusiones: Uno de cada 5 hipertensos sin enfermedad cardiovascular ≥60 años en atención primaria presentó disminución moderada del FGe. Además de la edad y el sexo, la albuminuria y la insuficiencia cardiaca fueron los principales factores asociados. A pesar de la mayor exposición a fármacos, el control de la PA fue inferior en ERC.

Introduction

Chronic kidney disease (CKD), defined as a reduction of the estimated glomerular filtration rate (eGFR) below 60 mL/min/1.73 m^2 or the presence of kidney damage,[1] is associated with an increased risk of cardiovascular morbidity and mortality and progression to end-stage renal disease (ESRD) in both the general population and in hypertensive patients.[2–5] Deaths from CKD increased by 82% worldwide between 1990 and 2010; this is the third uppermost increase out of the 25 leading causes of death after HIV/AIDS (396%) and diabetes (93%).[6]

Hypertension (HTN) is the second most common cause of ESRD. The number of cases of ESRD with a primary diagnosis of HTN is increasing, especially in the individulas >45 years, this is a consequence of greater survival rates in kidney failure patients and longer life expectancy.

In hypertensive patients with CKD, blood pressure (BP) control is essential to minimise progression of CKD, reduce complications inherent to kidney failure and reduce the associated risk of cardiovascular disease.[1,7,8] However, there is some debate about optimal values of BP. In the latest guidelines, the target BP of ≤130/80 mmHg has been limited to individuals with albuminuria of 30–300 mg/dL[1] or overt albuminuria,[7] while the target value of ≤140/90 mmHg has been maintained for the rest and, in some cases[8] for all hypertensive patients.

Current recommendations for the diagnosis of CKD include standardised determination of creatinine and eGFR using the CKD-EPI formula.[1] The CKD-EPI formula is more accurate at higher values of eGFR than previous formulas, and many