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Cognitive impairment and depression in a population of patients with chronic kidney disease in Colombia: a prevalence study

Carlos Edgardo Rodríguez-Angarita^{1*}, Rafael Mauricio Sanabria-Arenas², Juan Diego Vargas-Jaramillo¹ and Izcay Ronderos-Botero²

Abstract

Background: Growth of the elderly population is linked to the increase of comorbid conditions such as chronic kidney disease (CKD), depression, and cognitive impairment (CI). Cognitive impairment can vary from minimal deficits in the normal aging, to mild cognitive impairment with a prevalence ranging from 1 to 29 % in people ≥ 65 years of age, up to severe impairment with a prevalence of 6 to 42 %. The CI induced by depression usually affects the functional performance of the elderly.

Objective: The objective of the study is to describe the prevalence of CI and depression in patients ≥ 55 years with CKD stages 3 and 4, attending a secondary prevention program during 2012–2013.

Design: The design of the study is a cross-sectional study of simple random sampling, and 308 patients were invited to participate.

Setting: Patients were being treated in a CKD secondary prevention program in Bogotá, Colombia, during 2012–2013.

Patients: Participants were over 54 years diagnosed with CKD in stages 3 to 4 according to the K/DOQI classification.

Measurements: CI was assessed using NEUROPSI and modified Lawton Scale; depression was measured with Yesavage Geriatric Depression Scale and the MINI International Neuropsychiatric Interview.

Methods: Through an interview with the subjects, information regarding age, occupation, civil status, educational level, and clinical baseline variables was collected. Clinical assessment with specific instruments was performed by a multidisciplinary team composed of nephrologists, a psychiatrist, a neurologist, and a neuropsychologist.

Results: Two hundred and fifty-one patients agreed to participate. The average age was 76.3 (SD = 7.9) years, 67 % were males, and 86.5 % had CKD stage 3. Overall prevalence of CI was 51 % (95 % CI 44.7 to 57.2), and the prevalence of major depression reached 8 % (95 % CI 4.5 to 11.3); 4.8 % of the patients ($n = 12$) had both CI and depression.

Limitations: A limitation of the study is its design, which does not allow establishing the direction of the association between predictors and outcomes. Suggested associations must be interpreted cautiously as they are generated as hypothesis, which should be investigated in properly designed trials.

Conclusions: CI and depression are prevalent conditions among patients with CKD stages 3–4, with the greatest occurrence of CI, affecting half of the investigated Colombian patients with age ≥ 55 years.

Keywords: Cognitive impairment, Depression, Chronic kidney disease, Aging, Prevalence

* Correspondence: cerodriguez@fucs.salud.edu.co

¹Research Group in Neurology and Psychiatry (INEUROPSI), Fundación Universitaria de Ciencias de la Salud (FUCS), Carrera 19 No 8A-32, Bogotá, D.C., Colombia

Full list of author information is available at the end of the article