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Depression and clinical inertia in patients with uncontrolled hypertension

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Depression; clinical inertia; hypertension

TO THE EDITOR

Introduction

Depression is a known risk factor for poor prognosis among patients with cardiovascular disease[1]. Numerous biological and behavioral mechanisms have been proposed[2]. However, few studies have investigated the association between depression and 'clinical inertia', or lack of treatment intensification in individuals not at evidence-based goals for care[3]. To address this gap, we assessed whether a diagnosis of depression is associated with clinical inertia in patients with uncontrolled hypertension.

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Analysis and interpretation of data: Moise, Kronish, Davidson, Shea
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Methods

Between February, 2011 and September, 2013, we enrolled a convenience sample of 28 non-trainee primary care providers (PCP)and 158 patients with uncontrolled hypertension from two inner-city, academic hospital-based primary care clinics. Patients were eligible if they were ≥ 18 years old, prescribed one or more blood pressure (BP)medications, and had a BP ≥140/90 mmHg (or ≥130/80 mmHg if diabetic or with chronic kidney disease)on at least two consecutively scheduled visits with their PCP. Exclusion criteria were age > 80 years and dementia. Clinical inertia was defined as a lack of medication intensification, hypertension specialist referral, or work-up for identifiable hypertension despite uncontrolled BP. Depression status was based on PCP documentation in the electronic medical record.

We assessed established predictors of clinical inertia[4], including age, gender, current visit systolic blood pressure (SBP), prior visit SBP, number of BP medications, number of medical problems addressed during the visit, diabetes status, and medication adherence (Morisky Medication Adherence Scale). All measures were either abstracted from the medical record by a physician or, in the case of medication adherence, by interviewing patients following the clinic visit. The institutional review board of Columbia University Medical Center approved the protocol. Multilevel analysis to account for clustering within PCP was used to determine whether depression diagnosis was associated with clinical inertia after adjusting for established predictors of clinical inertia. Sensitivity analyses were performed in which we (1) excluded 36 patients with clinician uncertainty regarding BP control status (i.e., documentation of at least one home or current visit BP that was controlled)[5] (2) adjusted for PCP documentation of adherence assessment (3) excluded diabetics with SBP ≤ 140 mmHg. We used SAS Version 9.3 (SAS Institute Inc., Cary, NC)for all statistical analyses.

Results

The mean age (SD) of patients was 64.5 (8.8) years; 74.1% were women, 79.1% were Hispanic, 44.9% was diagnosed with depression and 61.2% had diabetes. On average, participants had a prior visit SBP of 158.7 (15.7) mmHg, current visit SBP of 154.6 (16.7) mmHg, were taking 2.5 (1.1) BP medications and had 5.3 (2.3) problems addressed during the visit. Clinical inertia was more common amongst depressed than non-depressed patients (70% vs. 51%; p=0.015). Depression diagnosis was associated with clinical inertia in both the adjusted and unadjusted multilevel analyses (RR=1.40; 95%CI, 1.11–1.74; p=0.004; adjusted relative risk [ARR]= 1.49; 95% CI, 1.06–2.10; p=0.021). The relationship remained after excluding those with at least one documented home or clinic visit SBP below goal (ARR=1.74; 95%CI, 1.07–2.83; p=0.025), adjusting for adherence counseling (ARR=1.49; 95% CI, 1.10–2.04; p=0.010) and excluding diabetics with SBP ≤ 140 mmHg (ARR=1.49; 95% CI, 0.99–2.23 p=0.057).

Discussion

Amongst patients with uncontrolled hypertension, clinical inertia was more likely in those with a diagnosis of depression. Hence, clinical inertia may be one mechanism by which depressed patients have worse cardiovascular outcomes. Research has shown that patients

with mental illness receive less intensive medical care, such as coronary revascularization[6]; our study extends this literature by demonstrating differences in clinician behavior with respect to cardiovascular risk factor management in this population. Future studies should explore the underlying processes that affect clinician treatment practices when managing a depressed patient. In the meantime, PCPs should be cautious about undertreating cardiovascular risk factors among patients identified as having depression.

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