Published in final edited form as:

Am Heart J. 2009 May 1; 157(5): e35–e37. doi:10.1016/j.ahj.2009.03.006.

TREATING DEPRESSION IN PATIENTS WITH HEART DISEASE: Is the Glass Half Empty or Half Full?

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We appreciate the opportunity to respond to the letters from Coyne and de Jong and from Thombs et al. regarding our observation that African Americans with coronary disease are less likely to be prescribed antidepressants compared to Caucasians, despite similar levels of depression. Our data are consistent with epidemiological studies showing a comparable prevalence of depression in African Americans compared to whites in community samples,^{1,2} but fewer diagnoses of depression and less treatment during outpatient office visits.³⁻⁷ Our study was not able to determine the reasons underlying these ethnic differences, however, and we agree that there is a need for further research to identify the factors involved. Hopefully, our observation will stimulate more attention to this important area of investigation.

We disagree with the suggestion by Coyne and de Jonge that our findings should be discounted because our data analyses were not valid. The sample size required for a logistic regression model is primarily determined by the response counts across the entire sample, not within a single stratum of a predictor.^{8,9} Moreover, our propensity model demonstrated that overfitting was unlikely to alter our conclusions. Although we did not conduct conventional inferential subgroup analyses, we examined potential heterogeneity in the parameter estimates, adopting a conservative approach by evaluating a limited number of pre-specified interaction terms and using the pooled testing procedure recommended by Harrell.¹⁰ We are confident that our findings were properly analyzed and that our results are valid.

We also find no basis for the assertion by Coyne and de Jong that our data reflect the carelessness by which antidepressants are prescribed. Although this practice may occur in some contexts, it is premature to come to that conclusion based on the data we reported. Although the prescription of antidepressant medications in patients with low depression scores may reflect over prescription of antidepressants, a more plausible explanation is that those patients actually may have benefited from treatment, since the majority of patients taking antidepressants in our study had been taking them before the hospitalization during which depressive symptomatology was measured. In this cross sectional analysis, we are unable to determine if depressive symptoms got worse, improved, or remained unchanged. This is a critical issue, as there is evidence to suggest that depressed cardiac patients who are resistant to treatment are at increased risk for adverse clinical events.¹¹ Furthermore, there

are data to suggest that undertreatment of African Americans with severe depression may have serious consequences, as reflected by higher suicide rates,¹² so that the issue of the potential undertreatment of depression in African Americans is not a trivial one.

Because of the limited data available to us, we also were not able to confirm that patients adhered to treatment recommendations and actually took the antidepressant medications as prescribed. We appreciate the suggestion by Thombs et al. that skepticism about the efficacy of antidepressant medications amongst African Americans may help explain our observations that African Americans were less likely to be prescribed antidepressant medications, even with high levels of depressive symptoms. We acknowledge the notion that African Americans may be more reluctant to accept psychotropic medications because of beliefs about the efficacy and side effects of such medications,¹³ although there are likely to be other barriers as well.¹⁴ It also is possible that patients may have received other forms of treatment for depression besides anti-depressant medications, which were not documented in patient charts.

Both Thombs et al. and Coyne and de Jong have discouraged screening for psychosocial risk factors¹⁵ claiming that a) assessment of depression using self-report questionnaires lacks adequate precision; and b) treatments may not be effective if not delivered in the context of sophisticated, multifaceted comprehensive care settings. We believe that this perspective is overly pessimistic and selectively ignores or minimizes data that are inconsistent with this philosophy. Used as a screening tool in cardiac patients, instruments such as the Beck Depression Inventory (BDI) show acceptable sensitivity and specificity, although, as with most screening tools, self-report instruments are not meant to replace clinical diagnosis. Furthermore, depressive symptoms assessed by self-report measures of depressive symptoms have been shown to be highly predictive of adverse events in various cardiac populations.¹⁶⁻¹⁹ We believe that psychometric instruments such as the BDI, while not perfect, are useful in that they are able to identify patients at risk for future adverse events and can provide important information for physicians caring for patients.

We also disagree with the assertion that there are no data to indicate that depression can be successfully treated in cardiac patients. Admittedly, data from randomized clinical trials are limited; however, several studies of depressed cardiac patients have shown that depressive symptoms can be reduced using cognitive behavior therapy (CBT)²⁰ and antidepressant medications.²¹⁻²² In the ENRICH trial²⁰, depressed patients receiving CBT scored more than 3 points lower on the BDI after 6 months of treatment compared to patients receiving education and usual care ($p < 0.001$), despite the fact that 44% of patients in usual care also received counseling, 19% were treated with antidepressants, and 22% participated in cardiac rehabilitation. In a secondary analysis of the ENRICH data, Taylor et al.²³ reported that risk of death or recurrent MI was significantly lower in the group of depressed acute post-MI patients taking selective serotonin reuptake inhibitors (SSRIs) when compared with those not taking SSRIs (adjusted hazard ratio, 0.57, 95% confidence interval, 0.38-0.84), which suggests that antidepressant use may improve clinical outcomes in depressed cardiac patients. Alternative treatments, such as exercise training, also may be effective in reducing depression and have been shown to be comparable to antidepressant medication in reducing depressive symptoms in patients with major depression.²⁴⁻²⁵ Physical inactivity also may help to explain the association between elevated depressive symptoms and adverse cardiac events,²⁶ and a randomized placebo-controlled trial of exercise and antidepressant medication is currently examining the benefits of exercise on depressive symptoms and biomarkers of risk.²⁷ We choose to focus on the glass being half full—not half empty. Despite limited evidence that treating depression results in improved clinical outcomes (i.e., reduced mortality and morbidity), the benefits of treating depression on quality of life, social relationships, and work performance should not be underestimated or undervalued.

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