

Recognition of Anxiety and Depressive Disorders in Patients with Asthma

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INTRODUCTION

Extensive literature exists that illustrates a correlation between anxiety/panic disorder and asthma. Comorbid anxiety has been linked to higher rates of emergency room visits for asthma-related symptoms (Pilipenko et al 2016). Systematic screening for comorbidities using validated questionnaires has shown anxiety to be one of the most common psychiatric or medical comorbidities in patients with asthma (Radhakrishna et al 2016). Similarly, depressive disorders have also been widely linked to diagnosis of asthma (Radhakrishna et al. 2016; Shen et al. 2016). Comorbid depressive disorders are reportedly related to increased risk of asthma exacerbations, hospitalizations, and emergency room visits due to asthma symptoms (Zhang et al 2016; Pilipenko et al. 2016). Significant symptoms of depression are related to asthma diagnosis (Ferro et al. 2016), self-reported asthma control (Sundborn et al. 2016) and bronchodilator responsiveness (Han YY et al. 2016). In clinical practice, it has been observed that patients with severe pulmonary disease may not be diagnosed with comorbid psychiatric illness because of presentation of somatic complaints rather than complaints of depression and anxiety (Rubin 1993). Identification of patients with undiagnosed anxiety may aid the physician in treating the patient and prevent subsequent self-reported exacerbations and unnecessary emergency visits. We tested the hypothesis that, comorbid psychiatric conditions are still often undiagnosed in patients with asthma.

METHODS

Patients with a chart diagnosis of asthma confirmed by a pulmonologist who had an appointment at Ambulatory Care Clinic (ACC) chest clinic or with a pulmonologist were pre-screened for inclusion. Charts were reviewed to confirm inclusion criteria before the patient was approached for participation. Patients were approached for study participation if they met the following criteria:

Inclusion criteria: 18 yr or older; confirmed diagnosis of asthma; Ability to speak and read English; Under OP Tx by specialist for at least 6 months; provides consent.

Exclusion criteria: History of psychotic disorder.

After consent was obtained, while the patient was waiting for their specialist appointment, they were asked to complete the self-report questionnaires described below.

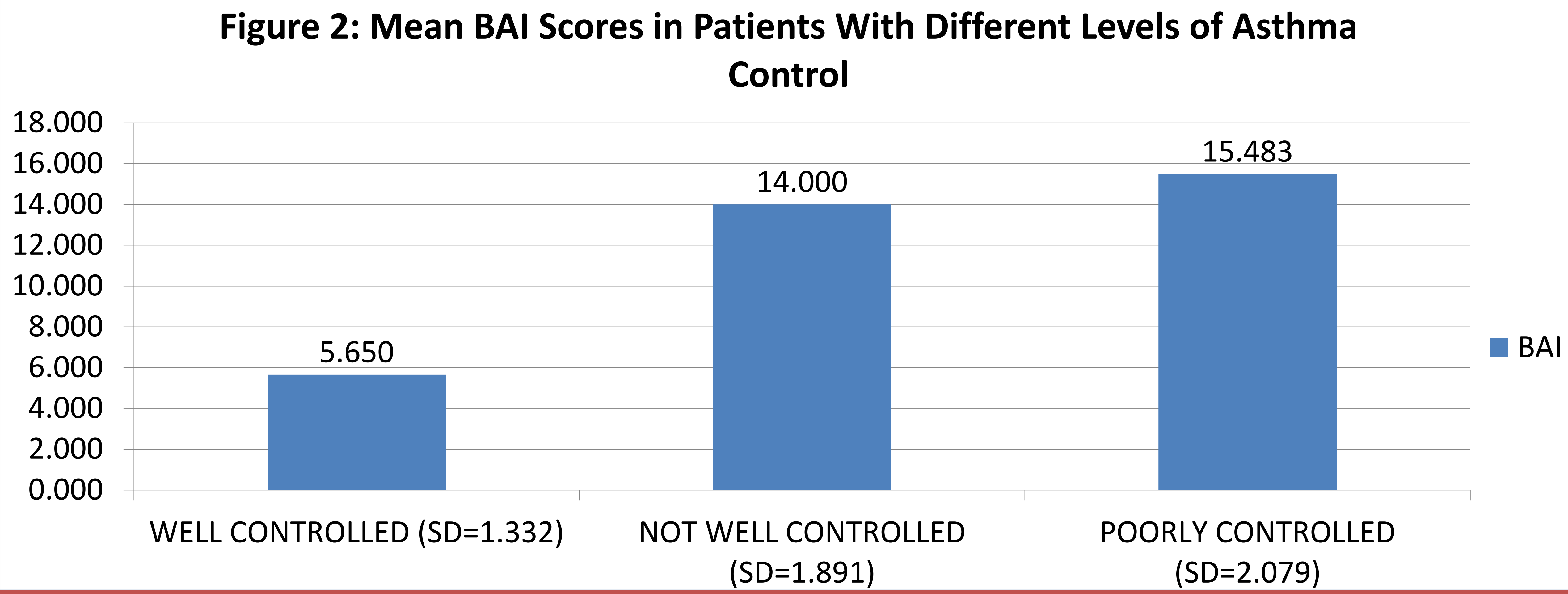
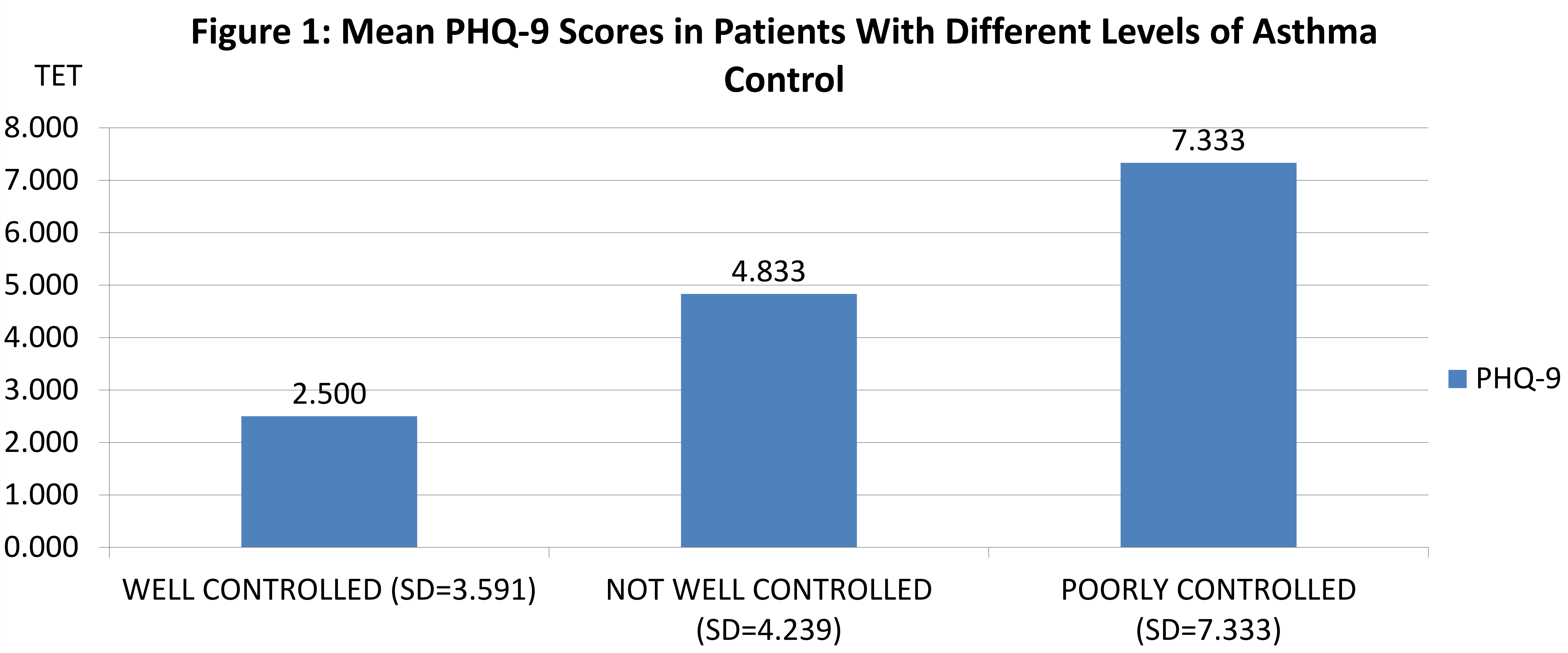
Asthma Control Test (ACT): This is a 5-item measure of asthma symptom control over the past 4 weeks. The cumulative score ranges from 0-2. Higher score = more controlled symptoms.

Asthma Quality of Life Questionnaire (AQLQ): This questionnaire measures functional problems related to symptoms of asthma. It is a 32-item instrument that measures domains of symptoms, activity limitation, emotional function, and environmental stimuli experienced over the last 2 weeks. Each item is scored on a scale of 1 (severely impaired) to 7 (not at all impaired).

Beck Anxiety Inventory (BAI): This is a 21-item self-report measure of anxiety. The questions are answered on a 4-point scale of not at all, mild, moderate, and severe. A total score of <22 indicates low anxiety, 22-35 indicates moderate anxiety, and 36 and above potentially concerning levels of anxiety.

PHQ-9: This is a 9-item questionnaire that quantifies symptoms of depression. The total score classifies depressive symptoms as none, mild, moderate, moderately severe, or severe. A score of ≥ 10 has a sensitivity and specificity of 88% for major depressive disorder (Kroenke et al. 2001).

RESULTS



DISCUSSION

We discovered that depressive symptoms were more prevalent in our sample population compared to symptoms of anxiety. We were able to confirm our hypothesis that the screened prevalence was higher for depression than existing diagnosis. Whether this also translates to positive clinical diagnoses of depression in those participants who had not been diagnosed before we do not know, for these individuals were free to seek (or not seek) specialist psychiatric care.

Scores of the PHQ9 and the ACT had a weak negative correlation ($r=-0.39$; $P<0.002$), as did scores of BAI and ACT ($r=-0.49$, $P<0.005$). A one way ANOVA of PHQ-9 scores and asthma severity levels shows that depression scores rise as asthma symptomatology becomes less well controlled ($F=5.87$, $P=0.005$; see Figure 1); the same is true of BAI scores, which increase as asthma symptomatology becomes less well controlled ($F=7.51$, $P=0.001$); see Figure

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