Journal of Affective Disorders 162 (2014) 120–127

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research report

Screening for bipolar depression in family medicine practices: Prevalence and clinical correlates

André F. Carvalho [a,b,*], Paulo R. Nunes-Neto [a], Milena S. Castelo [a,b], Danielle S. Macêdo [a,c], Dimos Dimellis [d], Márcio G. Soeiro-de-Souza [e], Joanna K. Soczynska [f,g], Roger S. McIntyre [f,g,h], Thomas N. Hyphantis [i], Konstantinos N. Fountoulakis [d]

[a] Psychiatry Research Group, Faculty of Medicine, Federal University of Ceará, Fortaleza, Ceará, Brazil
[b] Department of Clinical Medicine, Faculty of Medicine, Fortaleza, Ceará, Brazil
[c] Department of Physiology and Pharmacology, Federal University of Ceará, Fortaleza, Ceará, Brazil
[d] 3rd Department of Psychiatry, School of Medicine, Aristotle University of Thessaloniki, Thessaloniki, Greece
[e] Mood Disorders Unit (GRUDA), Department and Institute of Psychiatry, School of Medicine, University of Sao Paulo (IPq-HC-FMUSP), Brazil
[f] Department of Psychiatry, University of Toronto, Toronto, ON, Canada
[g] Mood Disorders Psychopharmacology Unit (MDPU), University Health Network, University of Toronto, ON, Canada
[h] Department of Pharmacology, University of Toronto, Toronto, ON, Canada
[i] Department of Psychiatry, School of Medicine, University of Ioannina, Ioannina, Greece

ARTICLE INFO

Article history:
Received 10 December 2013
Received in revised form
15 March 2014
Accepted 17 March 2014
Available online 30 March 2014

Keywords:
Primary care
Bipolar depression
Quality of life
Functioning
Service utilization
Bipolar disorder

ABSTRACT

Background: To compare individuals in primary care (PC) who screen positive for bipolar depression to those who screened positive for unipolar depression on mental health care ouctomes, PC service utilization, medical comorbidities, suicidal ideation, health-related quality of life (HRQoL) and psychosocial functioning.
Methods: In this cross-sectional study, participants ($N=1197$) answered self-reported measures of depressive symptoms (Center for epidemiologic studies depression scale), HRQoL (World Health Organization Quality of Life instrument-Abbreviated version), medical comorbidity (functional comorbidity index) and functioning (Functional Assessment Short test). Participants were partitioned into 'bipolar' and 'unipolar' depression groups based on a predefined cutoff on the Brazilian mood disorder questionnaire.
Results: The prevalence of bipolar depression was in PC was 4.6% (95% CI: 3.4–5.8). Participants with bipolar depression were more likely to endorse suicidal ideation, present with more medical comorbidities, report a worse physical HRQoL and have a higher rate of PC services utilization as compared to participants who screened positive for unipolar depression. Only six (10.9%) participants were recognized by the general practitioner as having a diagnosis of bipolar depression.
Limitations: The cross-sectional design prevents firm causal inferences from being drawn. A positive screen for BD does not substantiate the actual diagnosis. Co-morbid mental disorders were not accessed.
Conclusions: Bipolar depression is common and under-recognized in Brazilian PC services. A positive screen for bipolar depression was associated with worse clinical outcomes and greater PC service utilization.

1. Introduction

Major depressive disorder (MDD) occurs in approximately 5–10% of the general primary care population (Katon and Schulberg, 1992), in up to 20% of primary care patients with ischemic heart disease or diabetes (Fisher et al., 2012; Katon, 2011), and in 20% of primary care patients with lower socioeconomic status (Mauksch et al., 2003). Because depressive disorders commonly present in the primary care (PC) and are associated with significant functional impairment and impaired quality of live (QoL) (Cassano and Fava, 2002), screening instruments have been developed to aid in the identification of individuals with MDD.

The patient health questionnaire-9 (PHQ-9) (Kroenke et al., 2001) and the Center for Epidemiology Studies Depression Scale (CES-D) (Radloff, 1977) have been widely used in primary care settings to improve the recognition and ultimate treatment of MDD. However, a proportion of patients who screen positive for

* Correspondence to: Department of Clinical Medicine, Faculty of Medicine, Federal University of Ceará, Rua Prof. Costa Mendes, 1608, 4º andar, 60430-040, Fortaleza, CE, Brazil. Tel./fax: +55 85 33668054.
E-mail address: andrefc7@terra.com.br (A.F. Carvalho).

http://dx.doi.org/10.1016/j.jad.2014.03.040
0165-0327/

MDD do not actually have the disorder. Some patients with false positive screens may have bipolar disorder (BD), a mood disorder typified by recurrent depressive episodes and at least one manic (for type I BD) or hypomanic (for type II BD) episode (Phillips and Kupfer, 2013). Several lines of evidences suggest that up to 50% of patients presenting criteria for MDD may in fact have a bipolar spectrum disorder (Kupfer et al., 2012).

Evidence suggests that BD is highly prevalent in PC settings (Blacker and Clare, 1988; Castelo et al., 2012; Chiu and Chokka, 2011; Das et al., 2005; Olfson et al., 1997; Rouillon et al., 2011b; Schulberg et al., 1985). Previous reports have estimated the prevalence of BD in PC to be around 0.7–1.9% (Ansseau et al., 2004; Blacker and Clare, 1988; Olfson et al., 1997; Schulberg et al., 1985; Szadoczky et al., 1997). However, recent surveys indicate that the prevalence of BD is higher in general practices (Castelo et al., 2012; Das et al., 2005; Rouillon et al., 2011b). For example, Das et al. (2005) reported a high positive screen rate for BD (9.8%) among 1157 American patients who were seeking help at an urban PC center serving a low-income population . A similarly high positive screen rate for BD (8.3%) was observed in a large sample of 9240 attending 95 general practices in France (Rouillon et al., 2011b). These divergent findings might be due to the fact that previous studies had used structured diagnostic interviews which may have low sensitivity for detecting lifetime hypomanic episodes (as well as soft bipolarity cases), and thus may underestimate the prevalence of bipolar spectrum disorders (Angst et al., 2003; Smith et al., 2011). More recently, screening instruments for the detection of the whole BD spectrum have been developed, such as the mood disorder questionnaire (MDQ) (Hirschfeld et al., 2000), thereby enhancing the sensitivity for the detection of bipolar spectrum disorders (e.g., soft bipolarity) cases in the long term.

Patients with BD experience depressive episodes or depressive symptoms significantly more often than manic symptoms (Judd and Akiskal, 2003; Judd et al., 2003). A number of studies have shown that timely recognition of BD in primary care settings does not occur for most affected patients (Das et al., 2005; Manning et al., 1997; Smith et al., 2011). Treatment of BD (notably type I BD) solely with antidepressants may precipitate manic switches (Ghaemi et al., 2003, 2004), mixed episodes (Ghaemi et al., 2004) or rapid cycling (Ghaemi et al., 2003), although there are controversies in this regard (Licht et al., 2008). A significant proportion of patients with BD seek treatment in primary care practices (Berk et al., 2005; Bhugra and Flick, 2005). Therefore, prompt recognition and management of BD by general practitioners (GPs) may reduce the long delay between the onset of symptoms and the correct diagnosis of BD (Baldessarini et al., 2003; Lish et al., 1994).

There are very few studies examining the prevalence of bipolar depression in PC patients with either a diagnosis or a positive screen for major depression (Cerimele et al., 2013). To our knowledge there are only four previous published investigations which had addressed the prevalence of a positive screen for bipolar depression among patients with a diagnosis and/or positive screen for depression in PC settings (Hirschfeld et al., 2005; Kwong MBL et al., 2009; Olfson et al., 2005; Poutanen et al., 2008). The prevalence of either a positive screen or a diagnosis of bipolar depression in PC varies between 4.8% and 23.5% across studies (Hirschfeld et al., 2005; Kwong MBL et al., 2009; Olfson et al., 2005; Poutanen et al., 2008). There are sparse data regarding clinical correlates of a positive screen for bipolar depression as compared with unipolar depression in PC. Olfson et al. (2005) had found that a positive screen for BD was associated with a higher prevalence of suicidal ideation and similar levels of functioning among PC patients diagnosed with depression. Furthermore, little is known about the impact of a positive screen for BD (i.e., bipolar depression) in the various dimensions of quality of life, prevalence of medical comorbidities and PC service utilization among patients with a diagnosis and/or a positive screen for depression.

Brazil's Unified Health System (BUHS) is characterized by its universal access and is meant to provide free PC to all citizens (Saúde, 2011). According to the Brazil's Ministry of Health, BUHS seeks to achieve its goals through its family health program (FHP), a nationwide system funded by Federal, state and municipal governments (Saúde, 2011). The Brazilian FHP currently covers approximately 61% of the Brazilian population (i.e., ~105 million people) (Pinto et al., 2012).

Since a previous preliminary report (Castelo et al., 2012) indicated that a positive screen for BD is prevalent and clinically significant in Brazilian PC services, the present survey aimed to determine the prevalence of a positive screen for BD among patients who had screened positive for depression and were attending three Brazilian PC urban practices. Furthermore, we determined the impact of a positive screen for bipolar depression upon PC service utilization, suicidal ideation, quality of life, medical comorbidities, functioning, and PC service utilization when compared to patients with a positive screen for unipolar depression. We also explored the recognition of BD by GPs in participants who had screened positive for bipolar depression. Finally, we report mental health service utilization during the past one month as well as the prescription of psychotropic medications in our PC sample.

2. Methods

This cross-sectional survey was carried out in three urban primary care services in Fortaleza, Northeastern Brazil (Region III), which is Brazil's fifth largest city with ~3,600,000 inhabitants. These PC practices provide care for catchment community of approximately 380,000 citizens. The study was conducted between September, 2010 and August, 2011.

All procedures were in accordance to ethical standards on human experimentation (World Health Association Helsinki declaration) and were approved by our local ethical committee. All participants signed a written informed consent.

2.1. Sample

A consecutive sample of adult patients seeking evaluation and/or treatment in PC clinics was invited to participate in this survey. Patients were systematically approached to participate based on their order of arrival (a number was assigned by a social worker) for scheduled appointments in a given day (morning and afternoon periods). Eligible participants were between 18 and 70 years of age and had made at least one previous visit to PC (this criterion was applied to determine the recognition of BD by GPs) and were able to comprehend Portuguese. Patients were simultaneously recruited from each practice until a final sample of about 1150 eligible participants was obtained. This sample size was determined *a priori* to allow a prevalence estimate of a positive screen for bipolar depression with a precision of 1.5% (95% confidence interval) considering a prevalence of 5% and considering missing data and adjustment for potential confounders.

A total of 1937 patients were approached of whom 157 (8.1%) refused to participate. Of the 1780 patients who were screened for eligibility, 583 were ineligible to participate. Common reasons for ineligibility were: (i) not being between 18 and 70 years of age ($n=177$; 30.3%); (ii) not having visited the practice before ($n=313$; 53.7%) and (iii) having a medical condition severe enough (e.g., dementia) to prevent one's ability to provide informed consent or follow study procedures ($n=44$; 7.5%). The final sample consisted of 1197 eligible participants.