



Depression screening in pediatric epilepsy: Evidence for the benefit of a behavioral medicine service in early detection



Shanna M. Guilfoyle^{a,d,*}, Sally Monahan^b, Cindy Wesolowski^b, Avani C. Modi^{a,c,d}

^a Division of Behavioral Medicine and Clinical Psychology, Cincinnati Children's Hospital Medical Center, 3333 Burnet Ave., MLC 3015, Cincinnati, OH 45229, USA

^b Division of Neurology, Cincinnati Children's Hospital Medical Center, 333 Burnet Ave., MLC 2015, Cincinnati, OH 45229, USA

^c Center for Adherence Promotion and Self-Management, Division of Behavioral Medicine and Clinical Psychology, 3333 Burnet Ave., MLC 3079, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

^d University of Cincinnati School of Medicine, Cincinnati, OH, USA

ARTICLE INFO

Article history:

Received 22 September 2014

Revised 16 December 2014

Accepted 17 December 2014

Available online 16 January 2015

Keywords:

Health-related quality of life

Epilepsy/seizures

Psychology

Suicidal ideation

Depression

Comorbidity

Screening

ABSTRACT

Despite the increased risk and prevalence of depression in youth with epilepsy, only one-third receive mental health services. Untreated depression can contribute to negative outcomes and increased health-care utilization and medical cost. Proactive behavioral medicine screening may facilitate identification of depressive symptoms and necessary interventions in efforts to optimize behavioral health and health-related quality of life (HRQOL). Primary study aims included the examination of 1) rates of self-reported depression in youth with epilepsy, 2) differences in depression by demographic and medical variables, 3) the impact of depression on HRQOL, and 4) changes in depression and suicidal ideation following a behavioral medicine consultation. As part of routine clinic care over a 24-month period, youth with epilepsy of 7–17 years of age completed the Children's Depression Inventory—Second Edition. Parents completed the PedsQL. A chart review was conducted to ascertain demographics, medical variables, and behavioral medicine visits and recommendations. A subsample with Time 1 and Time 2 depression data was examined. Time 1 participants included 311 youth with epilepsy ($M_{age} = 11.9$ years, 50% female, 84% Caucasian, 46.0% with localization-related epilepsy, 71.0% with seizure control in the past 3 months). Elevated depression was identified in 23% of youth, with 14% endorsing suicidal ideation. Depression significantly varied by age, antiepileptic drug, and insurance. After controlling for seizure status, HRQOL worsened with elevated depression. Depression significantly decreased from Time 1 to Time 2 ($n = 159$), particularly for those referred for behavioral medicine services at Time 1. Systematic assessment and early detection of depression and/or suicidal ideation in youth with epilepsy can improve HRQOL and decrease depression. Depression screening can be implemented through clinic-based behavioral medicine services.

© 2014 Elsevier Inc. All rights reserved.

1. Introduction

Approximately 6.3 in 1000 children and adolescents currently receive treatment for epilepsy [1]. Youth with epilepsy (YWE) have a 3–6 times increased risk of psychopathology compared to the general population [2], with the prevalence of depression in pediatric epilepsy ranging from 10 to 30% [3–6]. While the increased risk of depression in YWE has been generally well established in the literature, a majority of the studies have relied on parent-report measures [3–6] and only a paucity of studies have actually asked the child to report on their symptoms. Of the few studies that have assessed child self-report using the

original Children's Depression Inventory [7], a well-validated self-report measure of depressive symptoms, 7–8% reported clinically elevated depressive symptoms [5,8] while up to 20% have at-risk or clinically elevated symptoms. Mild to moderate suicidal ideation (SI) was endorsed by 27% of YWE [5]. Older female youth may be at increased risk of depression [3]. Currently, self-reported depression rates using the CDI-2 [9], a revised version of the CDI, have not been established.

Despite the increased risk and prevalence of depression in YWE, only one-third of whom receive behavioral medicine services [3]. Untreated depression in YWE can contribute to negative outcomes, including poor health-related quality of life (HRQOL) [10–12] and increased health-care utilization and medical cost [1]. Proactive behavioral medicine screening can facilitate identification of depressive symptoms and necessary psychological interventions [13–15] in efforts to optimize behavioral health and HRQOL. Although interdisciplinary models of care for epilepsy have been promoted in expert consensus statements, few pediatric comprehensive epilepsy centers have been able to incorporate behavioral medicine services into routine care as standard of practice [18].

* Corresponding author at: Cincinnati Children's Hospital Medical Center, Division of Behavioral Medicine and Clinical Psychology, 3333 Burnet Ave., MC 3015, Cincinnati, OH 45229, USA. Tel.: +1 513 636 8757; fax: +1 513 636 7756.

E-mail addresses: shanna.guilfoyle@cchmc.org (S.M. Guilfoyle), sally.monahan@cchmc.org (S. Monahan), cindy.wesolowski@cchmc.org (C. Wesolowski), avani.modi@cchmc.org (A.C. Modi).

The purpose of the current observational study, including a sample of youth from clinical practice, was to examine self-reported depressive symptoms using the CDI-2 with updated normative data in a cohort of YWE of 7 to 17 years of age. Observational studies can optimize external validity and offer larger cohorts and more generalizable findings. Primary study aims included the examination of the following: 1) rates of self-reported depressive symptoms and SI in YWE; 2) differences in depressive symptoms by sex, age, time since diagnosis, antiepileptic drug (AED), seizure type, and insurance status as a proxy of socioeconomic status; 3) the impact of depressive symptoms on HRQOL; and 4) changes in depressive symptoms and SI following a clinic-based behavioral medicine consultation.

2. Methods

2.1. The New-Onset Seizure Clinic

The patients included in the current study received epilepsy treatment within the New-Onset Seizure (NOS) Clinic, which is part of a large pediatric tertiary care center located in a tri-state area in the Midwestern United States. The NOS Clinic treats medically uncomplicated children (i.e., absent of significant intellectual disability and/or central nervous system deficits) with newly diagnosed epilepsy. Children are triaged to a general neurologist if they meet any of the NOS Clinic exclusion criteria noted below. Approximately 800 patients receive epilepsy care within the NOS Clinic annually, with a goal of “no seizures, no side effects, and best quality of life” [18]. The NOS Clinic provides interdisciplinary care, which includes epileptologists, nurse practitioners, psychologists, pharmacists, social workers, and nurses. Epileptologists initially diagnose patients with epilepsy and prescribe an AED. All follow-up epilepsy care is conducted during quarterly medical visits by a nurse practitioner specialist. In conjunction with these follow-up medical visits, patients receive a behavioral medicine consultation that includes a psychosocial screening 1–2 times annually by a licensed clinical psychologist specializing in pediatric epilepsy. The frequency of the behavioral medicine consultation is based upon clinical need (i.e., YWE with higher risk are followed up more frequently). The goal of the behavioral medicine consultation is to improve patient HRQOL and behavioral health functioning. The consultation consists of a behavioral screening using standardized questionnaires, which is then followed by education and review of behavioral strategies targeting the presenting issues.

2.2. Participants

Exclusion criteria for children in the NOS Clinic included the following: (a) presence of another significant medical disorder (e.g., diabetes and brain tumors), (b) prior AED initiation, (c) families seeking a second opinion, or (d) presence of a significant parent-reported psychological disorder (e.g., bipolar disorder) or developmental delay (e.g., autism). This process results in a homogeneous patient population of typically developing youth with new-onset epilepsy (2–22 years of age) who are expected to positively respond to AED treatment. Approximately 25% of these patients struggle to obtain seizure control. However, clinical data were collected at a time when long-term prognosis was unknown. If comorbidities develop once care is established, patients continue to receive care in the NOS Clinic.

2.3. Procedures

The medical records of all patients followed in the NOS Clinic from July 1, 2011 to June 20, 2013 who were between 7 and 17 years of age during their initial behavioral medicine consultation and completed the CDI-2 were reviewed ($N = 311$). Children of 7–17 years of age with reading impairments that could not complete the self-report questionnaire were not included in the current sample. As previously noted,

patients are expected to receive behavioral medicine services 1–2 times per year. Trained professional research assistants extracted data on a standardized form from the medical record and systematically completed chart review forms for each patient at each behavioral medicine consultation visit documenting the following: patient and family demographics, date of visit, epilepsy type and diagnosis, prescribed AED, presence versus absence of seizure since the last clinic visit, and depression and HRQOL scores. As part of the behavioral medicine consultation conducted by the licensed clinical psychologist, depression and HRQOL measures were completed and scores were reviewed with families. If SI was endorsed or clinically elevated depressive symptoms were identified, a risk assessment and safety plan were reviewed and an expedited referral for further behavioral medicine services and evaluation was provided. Institutional Review Board approval of the current chart review/study protocol was obtained prior to conduction of chart review.

2.4. Measures

2.4.1. The Children's Depression Inventory—Second Edition

The Children's Depression Inventory—Second Edition (CDI-2) [9] is a 28-item self-reported depression inventory comprised of 4 subscales within two primary domains: Emotional Problems (i.e., Negative Mood/Physical Symptoms and Negative Self-Esteem) and Functional Problems (Ineffectiveness and Interpersonal Problems). Each item is scored between 0 and 3 points, with all points added to comprise a total raw score. Raw scores are converted to T-scores ranging from ≤ 40 to ≥ 90 based on general population norms which are standardized for age and gender. The mean score \pm standard deviation in the general child and adolescent population is 50 ± 10 . T-scores fall into 1 of 5 classifications: very elevated: 70+, elevated: 65–69, high average: 60–64, average: 41–59, and low: < 40 . For the purposes of this study, the high average classification was considered “at risk.” T-scores of ≥ 65 are consistent with a diagnosis of depression [9]. For the current study, the subsample detected to be at risk included patients with T-scores of 60 and above (i.e., high average/at risk, elevated, and very elevated). The CDI-2 has excellent reliability and validity [9].

2.4.2. The PedsQL™ Parent Proxy-Report 4.0

The PedsQL™ Parent Proxy-Report 4.0 [16,17] is a 23-item generic HRQOL measure developed for caregivers of youth between 2 and 18 years of age and consists of four subscales: Physical (8 items; e.g., problems with “low energy level”), Emotional (5 items; e.g., problems with “feeling angry”), Social (5 items; e.g., problems with “getting along with other children/teens”), and School (5 items; e.g., problems with “missing school because of not feeling well”). The measure uses a 5-point Likert scale (0 = “never a problem” to 4 = “almost always a problem”). Two summary scores are also calculated: psychosocial functioning scale score (Emotional, Social, and School subscales) and a total scale score. The PedsQL™ Parent Proxy-Report has demonstrated good reliability ($\alpha = 0.74$ – 0.92) as well as excellent validity in pediatric populations [16,17]. Higher scores represent better HRQOL. Only total scores were used in analyses. The PedsQL has good psychometrics for use in populations with pediatric epilepsy.

2.5. Data analytic plan

Descriptive data were examined, including means, standard deviations, and frequencies. Independent samples *t*-tests or analyses of variance (ANOVA) were conducted to examine group differences on Time 1 depressive symptoms. Independent variables included sex (males versus females), race (Caucasian versus African-American), epilepsy type (localization-related, generalized, and unclassified), insurance status (private, Medicaid, self-pay), AED (only the 4 most commonly prescribed: carbamazepine, valproic acid, ethosuximide, and levetiracetam), and seizure status (absent or present in the past 3 months).

Download English Version:

<https://daneshyari.com/en/article/6011479>

Download Persian Version:

<https://daneshyari.com/article/6011479>

[Daneshyari.com](https://daneshyari.com)