Pediatric Neurology 50 (2014) 49–56

Contents lists available at ScienceDirect

Pediatric Neurology

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

Original Article

Screening for Psychiatric Comorbidity in Children With Recurrent Headache or Recurrent Abdominal Pain

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ABSTRACT

BACKGROUND: Recurrent pain symptoms in children are associated with psychiatric comorbidities that could complicate treatment. We investigated the prevalence of psychiatric comorbidity in children with recurrent headache or recurrent abdominal pain and evaluated the screening potential of the Strength and Difficulties Questionnaire compared with the Development and Well-Being Assessment (DAWBA). **METHODS:** Eighty-three outpatients aged 5-17 years attending a tertiary medical center for a primary diagnosis of migraine (n = 32), tension-type headache (n = 32), or recurrent abdominal pain (n = 19), and 33 healthy matched controls completed the brief self-reporting Strength and Difficulties Questionnaire followed by the Development and Well-Being Assessment. Findings were compared among groups and between instruments. **RESULTS:** The pain groups were characterized by a significantly higher number of Development and Well-Being Assessment diagnoses (range 0-11) than controls and a significantly greater prevalence (by category) of Development and Well-Being Assessment diagnoses ($P < 0.001$ for both). Anxiety and depression were the most prevalent Development and Well-Being Assessment diagnoses. Comorbidities were more severe in the headache groups than the controls ($P < 0.001$). In general, any diagnosis by the Development and Well-Being Assessment was associated with a significantly higher Strength and Difficulties Questionnaire score ($P < 0.001$). Abnormal scores on the emotional, conduct, and hyperactivity Strength and Difficulties Questionnaire scales were significantly predictive of a Development and Well-Being Assessment diagnosis ($P < 0.003$). **CONCLUSION:** Children referred to specialized outpatient pediatric units for evaluation of recurrent pain are at high risk of psychopathology. The Strength and Difficulties Questionnaire may serve as a rapid cost-effective tool for initial screening of these patients.

Keywords: Strength and Difficulties Questionnaire (SDQ), psychiatric comorbidity, children, recurrent abdominal pain, recurrent headache, Development and Well-Being Assessment (DAWBA)

Pediatr Neurol 2014; 50: 49-56

Introduction

Recurrent pain symptoms are often encountered in pediatric primary care.[1] Headache is the most common somatic complaint in children,[2] accounting for 1% to 2% of all visits to pediatricians.[1] The prevalence of headache increases throughout childhood, reaching a peak at about 13 years of age in both sexes.[1,2] The two most frequent types of primary pediatric headache are migraine and tension-type headache.[3,4] In a large epidemiologic study of the 7- to 14-year age group based on the diagnostic criteria of the International Classification of Headache Disorders-II, Kröner-Herwig et al.[5] found that the prevalence rate of migraine was 7.5% and 18.5% for tension-type headache.

Pediatric headache has been associated with psychiatric comorbidities, although the impact of the findings are still unclear. An early study found that individuals with recurrent headache had significantly more symptoms of anxiety,

Article History:
Received March 16, 2013; Accepted in final form July 14, 2013
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http://dx.doi.org/10.1016/j.pediatrneurol.2013.07.011

depression, and somatization than controls and were at higher risk of emotional disorders and medication overuse, suggesting the need for a multisystem treatment approach.[6] Others also reported psychiatric disorders in children with recurrent headache, especially tension-type,[7,8] and high rates of behavioral problems in children with migraine.[9] However, in a review of 11 studies in the literature, Amouroux et al.[10] reported that patients with migraine had slightly higher scores than controls on at least one of the anxiety or depression scales, but their average scores in all studies were still within the normal range established at validation of the instruments. Guidetti et al.[11] found that the presence of any psychiatric comorbidity in a child with migraine or tension-type headache may be a risk factor for worsening headaches over time, whereas a more recent review study concluded that children with migraine do not exhibit more psychiatric comorbidities than healthy controls.[12] The latter authors attributed the discrepancy among studies to differences in study populations, duration of follow-up, and psychiatric diagnostic tools.

Recurrent abdominal pain (RAP) occurs in 7% to 25% in children[7,13] and has been significantly associated with anxiety disorders and depression.[1,4,14-17] In a population-based study, children with RAP had significantly more psychiatric morbidity than children without RAP. The strongest effect was for emotional (anxiety) symptoms compared with the general population.[18]

The presence of psychiatric comorbidities in children with recurrent pain complicates their management.[19,20] Many pediatricians feel that they do not have the time or competence to address these issues.[21] In addition, there is a shortage of pediatric mental health services and a lack of valid, low-cost psychiatric diagnostic tools that are applicable in pediatric primary care. Data on problem behavioral in children are usually collected by clinical interviews and standardized questionnaires, such as the Child Behavior Checklist, a parent-report tool designed to assess behavioral and emotional problems in children and adolescents. This checklist has been found effective for use in both clinical practice and research and may serve as both a screening tool and a basis for diagnostic formulations.[22] It yields a total problem score, two broadband scores (internalizing problems and externalizing problems), and eight different syndrome scales.[22] However, the CBLC is very long (140 items) and time-consuming.

The Strength and Difficulties Questionnaire (SDQ) is a much briefer (25 items) self- and parental-report screen.[23] Its findings have been shown to correlate highly with the Child Behavior Checklist[24] and it has been recommended by the Preventive Child Health Care System as the first step for the detection and classification of psychosocial problems in the adolescent age group.[25] The SDQ has been validated in many studies worldwide[23,26-33] and is available in more than 30 languages. It has been used in epidemiological, developmental, and clinical research as well as in routine clinical and educational practice. Its brevity makes it easier to use than the CBLC and may offer an important advantage in initial screening of children, although the differences in length between the two instruments might alter their psychometric properties.[24]

The Development and Well-Being Assessment (DAWBA) is a comprehensive semistructured interview for the diagnosis of psychiatric disorders.[33-38] It can either be administered by trained lay interviewers or self-completed online. It has been found to been an effective diagnostic tool in clinical and epidemiological settings in different languages and countries.[23,26-28,34-38] The questions for each disorder closely follow the diagnostic criteria operationalized in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition. Each section contains 20-25 items, with skip-rules such that the full set of items is administered only when the initial screening items indicate a relevant problem.[33] To our knowledge, the DAWBA has never been used in a study of recurrent headache or abdominal pain in children.

Our aim was to determine the prevalence of psychiatric comorbidities in children with recurrent headache (migraine or tension-type) or RAP attending a tertiary hospital outpatient pediatric unit and to evaluate the applicability and reliability of the brief SDQ for initial patient assessment using the DAWBA as a reference. If effective, the SDQ could provide a valuable screening tool in this setting for practicing pediatricians.

Materials and Methods

Study participants

The study group consisted of children and adolescents attending a specialized headache division of a general outpatient hospitalization unit of the gastroenterology outpatient unit of the same tertiary university-affiliated pediatric medical center. All children were referred to the unit by their primary care pediatrician in the community after diagnosis or first-line therapeutic failure, and all were referred for this study by pediatricians of the specialized units. Only children who met the standard criteria for recurrent headache or RAP were included. Migraine and tension headache were defined according to the International Classification of Headache Disorders-II.[3] RAP was diagnosed according to the definition of Apley and Hale[13]: three or more episodes of abdominal pain sufficient to interfere with daily activities in the previous 3 months. One parent of each patient also took part in the study. Patients were divided by their primary diagnosis into three groups: migraine headache, tension-type headache, and RAP.

The control group consisted of subjects attending the general outpatient unit of the same hospital for follow-up after a recovery period of a brief acute illness (gastroenteritis, pneumonia, or urinary tract infection) that occurred before discharge from their follow-up in the outpatient unit. Control subjects were matched to the study patients by age and sex. Candidates for the control group were asked if they had recurrent headaches or RAP. Those who answered positively (either the child him/herself or the parent) were excluded from the study.

Instruments

- The DAWBA was developed by Goodman et al.[33] to generate International Classification of Diseases-10 and Diagnostic and Statistical Manual of Mental Disorders, 4th edition, psychiatric diagnoses, as follows: separation anxiety disorder, specific phobia, social phobia, generalized anxiety disorder, panic disorder, posttraumatic stress disorder, obsessive-compulsive disorder, depressive disorder, attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and conduct disorder. Trained nonclinical interviewers administer the structured questionnaire to the subject (adolescent version, for ages 11-17 years) and to his or her parent (parent version). If definite symptoms are identified, the interviewers use open-ended questions and supplementary prompts to get parents to describe the problem in their own words. The descriptions are transcribed verbatim by the interviewers but not rated by them. The information from the different sources is then drawn together by a computer program that generates a summary sheet and a likely diagnosis. These, combined with the verbatim transcriptions, form a good starting point for experienced clinical