Psychological and Psychiatric Issues in Urinary and Fecal Incontinence

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Abbreviations and Acronyms

ADHD = attention deficit hyperactivity disorder

CBCL = Child Behavior Checklist

DSM = Diagnostic and Statistical Manual of Mental Disorders

ICCS = International Children's Continence Society

ODD = oppositional defiant disorder

SSIPPE = Short Screening Instrument for Psychological Problems in Enuresis

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The full ICCS Document K with all references and appendices can be obtained at the ICCS website (www.i-c-c-s.org).

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Purpose: We provide an overview of the psychological and psychiatric aspects of nocturnal enuresis, urinary and fecal incontinence. Clinical behavioral disorders and subclinical psychological symptoms are reviewed. Aspects of screening, assessment, counseling and in severe cases treatment are outlined, and recommendations are formulated.

Materials and Methods: Relevant publications on psychological and psychiatric aspects are reviewed. The recommendations passed several rounds of consensus finding, and were circulated among International Children's Continence Society members and external experts.

Results: In addition to subclinical effects on self-esteem, quality of life and distress, the rate of comorbid clinical behavioral disorders is increased. In fact, 20% to 30% of children with nocturnal enuresis, 20% to 40% with daytime urinary incontinence and 30% to 50% with fecal incontinence fulfill the criteria for ICD-10 or Diagnostic and Statistical Manual of Mental Disorders IV psychiatric disorders. These concomitant disturbances require assessment and counseling, and in severe cases treatment. They have a negative effect on compliance and outcome if not addressed and left untreated.

Conclusions: Because the comorbidity rate is high, screening for psychological symptoms is recommended for all children in all settings with enuresis and/or daytime urinary and/or fecal incontinence. Standardized, validated questionnaires are recommended. In addition to clinical observation and history, a short screening questionnaire can be used as a first step. If problem behaviors are present a longer broadband questionnaire is recommended. If problem items in the clinical range are noted, a full child psychiatric or psychological assessment is recommended.

Key Words: nocturnal enuresis, urinary incontinence, fecal incontinence, encopresis, mental disorders

THE ICCS Document K represents guidelines recommended by the ICCS for evaluating psychological and psychiatric issues in children with enuresis, daytime and fecal incontinence, and how to treat them if indicated. Psychological issues encompass subclinical symptoms as well as comorbid, clinically relevant psychiatric disorders. These have been neglected aspects in the care of children with enuresis and urinary incontinence at many centers, and have not been dealt with explicitly in the ICCS Standardization of Terminology document.[1]

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The rate of comorbid behavioral and emotional disorders in children with incontinence is high.[2] In representative studies 20% to 30% of children with nocturnal enuresis, 20% to 40% with daytime urinary incontinence and 30% to 50% with fecal incontinence fulfill the criteria for psychiatric disorders as classified in the ICD-10 or the DSM-IV.[3,4] The same care used to exclude organic causes should be applied to the assessment of behavioral aspects. Therefore, pediatricians, urologists or any other professionals working with incontinent children should have a basic understanding of psychological principles to treat their young patients adequately.

With training, subclinical issues can be dealt with in most clinical settings in the context of counseling, provision of information and urotherapy. Often psychological symptoms will resolve on attaining continence, while manifest disorders usually do not. In addition, children with psychological disorders are less compliant so that the failure rate of incontinence treatment is higher. The treatment of comorbid clinical disorders requires expertise and experience. The professions involved are child psychiatrists, psychologists and pediatricians with special training in this field (usually behavioral and developmental pediatricians).

We provide an overview of psychological aspects of urinary and fecal incontinence. Whenever possible, representative population based studies are cited. Aspects of assessment and treatment are outlined, and recommendations for referral to mental health specialists are formulated. A step-by-step screening procedure that can be implemented in all settings is provided.

This document was produced on the initiative of the ICCS Board and the Standardization Subcommittee, and has passed several rounds of consensus finding. The authors first completed a draft that was circulated among ICCS members as well as external experts. Comments were invited and integrated into the text before it was finalized.

CLINICAL BEHAVIORAL DISORDERS

General Aspects

The general rate of clinically relevant behavioral disorders in children and adolescents lies between 10% and 15%.[2] The rate of comorbid psychological disorders is increased in children with all types of incontinence. One can differentiate among externalizing or behavioral disorders with visible behavioral symptoms (eg conduct disorders, ADHD), internalizing disorders with introversive, emotional symptoms (eg anxiety, depressive disorders) and other disorders (eg anorexia nervosa, autism).

Clinically relevant disorders can be assessed categorically based on a detailed diagnostic process that leads to a professional diagnosis according to standardized classification schemes (ICD-10 or DSM-IV).[3,4] Dimensional assessment is based on symptom scores by questionnaires but does not provide a diagnosis. Cutoffs are defined to delineate a clinical (and subclinical) range.

Nocturnal Enuresis

Epidemiological representative studies show that 20% to 30% of all children with enuresis show clinically relevant behavioral problems at rates 2 to 4 times higher than nonwetting children.[2,5] The rates of comorbid disorders are increased in samples characterized by older age, male gender, low socioeconomic status, admission to specialized clinics, and by secondary and nonmonosymptomatic subtypes.[6]

Children with primary nocturnal enuresis were not more deviant than controls in epidemiological studies.[5] In clinical settings up to 29% of children showed clinical behavioral problems.[7–9] In contrast, secondary nocturnal enuresis was preceded by a higher rate of weighted life events and was significantly associated with a higher rate of DSM-III psychiatric disorders in epidemiological studies, which can persist into adolescence.[5,10] Children with secondary enuresis have the highest risk of psychological disorders (in up to 75% of cases).[7] In a large epidemiological study children with monosymptomatic nocturnal enuresis had fewer behavioral symptoms than those with the nonmonosymptomatic forms, especially fears and anxieties.[11] This is the group with the lowest comorbidity rates.[8,11]

Although internalizing symptoms and emotional disorders can be present, externalizing disorders predominate.[7,12] The most specific comorbid disorder with enuresis is ADHD (DSM-IV). In an epidemiological study 9.6% of children with enuresis had ADHD symptoms vs 3.4% of nonwetting children.[13] In a clinic setting the comorbidity rate for ADHD and nocturnal enuresis was 28.3% (vs 10.3% in the community).[14] ADHD continued to be present in 72.5% of children in a 2-year followup indicating a highly stable rate.[15] Children with ADHD and enuresis continued to wet much more often (65%) than controls (37%, OR 3.17). At a 4-year followup 64% still had ADHD.[16] Of these children 42% continued to wet at night compared to 39% of the controls.

In clinical practice children with ADHD are more difficult to treat. In a retrospective study children with comorbid ADHD and nocturnal enuresis had a worse outcome with alarm treatment than those with nocturnal enuresis only. For the ADHD and nonADHD groups at 6 months 43% (vs 69%) were dry and at 12 months 19% (vs 66%) were dry.[17] Noncompliance was reported in 38% of children with ADHD but only in 22% of controls. Therefore, comorbid diagnoses of enuresis and ADHD require special

attention, and both need to be treated to ensure maximum compliance with procedures.

Although ADHD is common, many other childhood psychiatric disorders can coexist with enuresis such as ODD and conduct disorders, and emotional disorders such as depressive and anxiety disorders. For the individual patient a screening and, if indicated, a comprehensive assessment is needed in every case.

Daytime Urinary Incontinence

Fewer studies have addressed the specific problems of daytime incontinence in children. These children are generally more deviant than children with just enuresis.[7] In an epidemiological study children with daytime wetting had significantly increased rates of psychological problems,[18] including separation anxiety (11.4%), attention deficit (24.8%), oppositional behavior (10.9%) and conduct problems (11.8%).[16] In addition, delayed development, difficult temperament and maternal depression/anxiety were associated with daytime wetting and soiling.[19] In another epidemiological study 37% of children with daytime incontinence had ADHD symptoms vs 3.4% of nonwetting children.[13] With comorbid ADHD the treatment outcome and compliance are worse. In a retrospective analysis 68% of children with daytime incontinence and ADHD became dry compared to 91% of controls.[17]

Children with urge incontinence have slightly higher rates of psychiatric, predominantly internalizing, disorders than controls.[2,20] Voiding postponement is often associated with externalizing disorders such as ODD.[2,20] There are no systematic studies on comorbid behavioral disorders in children with underactive bladder and giggle incontinence. Abuse, deprivation and other familial stressors have been described in children with dysfunctional voiding.[2] Regarding the other subtypes of urinary incontinence, not even anecdotal data are available.

Fecal Incontinence

In a large epidemiological study children with fecal incontinence had significantly increased rates of separation anxiety (4.3%), specific phobias (4.3%), generalized anxiety (3.4%), ADHD (9.2%) and ODD (11.9%).[21] In clinical studies 35% to 50% of all children with fecal incontinence had clinical symptom scores 3 to 5 times higher than nonaffected children.[2,21,22] Regarding subtypes, children with constipation have the same rate of behavioral scores in the clinical range as those with nonretentive fecal incontinence.[22,23]

There is no specific psychopathology typical for fecal incontinence. All types of behavioral and emotional disorders can coexist, both internalizing as well as externalizing symptoms and disorders.[2,21] The co-occurrence of fecal incontinence and sexual abuse has also been described but encopresis is not necessarily more common among abused children than in those with other psychiatric disorders.[2] Children with combined fecal and urinary incontinence have an even higher rate of behavioral and emotional disorders than those with wetting problems alone.[2] Children with behavioral maladjustment are less compliant, so if these problems are not addressed the treatment will be less successful.[24]

SUBCLINICAL SYMPTOMS

Subclinical behavioral signs and symptoms are common and understandable reactions toward the wetting problem, and are not disorders per se. All types of urinary incontinence are associated with a high level of distress in children.[2] In a large population based study 36.7% of children consider bed-wetting to be really difficult, ranking 8th behind other stressful life events.[25] Reduced self-esteem and lower quality of life also have been reported.[2,26] Often these symptoms will resolve upon attaining dryness. However, successful intervention may be compromised by noncompliance by some children.[17]

Children with fecal incontinence showed lower social functioning and self-esteem, and felt less in control of positive life events.[2] Some of these subclinical symptoms will diminish if treated. However, unsuccessful treatment may lead to impaired quality of life not only in childhood but also in adulthood.[27]

Enuresis and urinary incontinence may also be distressing for parents. Generally parents are concerned about the welfare of their child and try to cope actively.[28] A minority of parents show an attitude that has been described as parental intolerance. Convinced that their child is wetting on purpose, the risk of punishment is increased. Parents of children with fecal incontinence have also reported being stressed and worried about their child's problems.[2]

ASSESSMENT AND TREATMENT OF PSYCHOLOGICAL SYMPTOMS AND DISORDERS

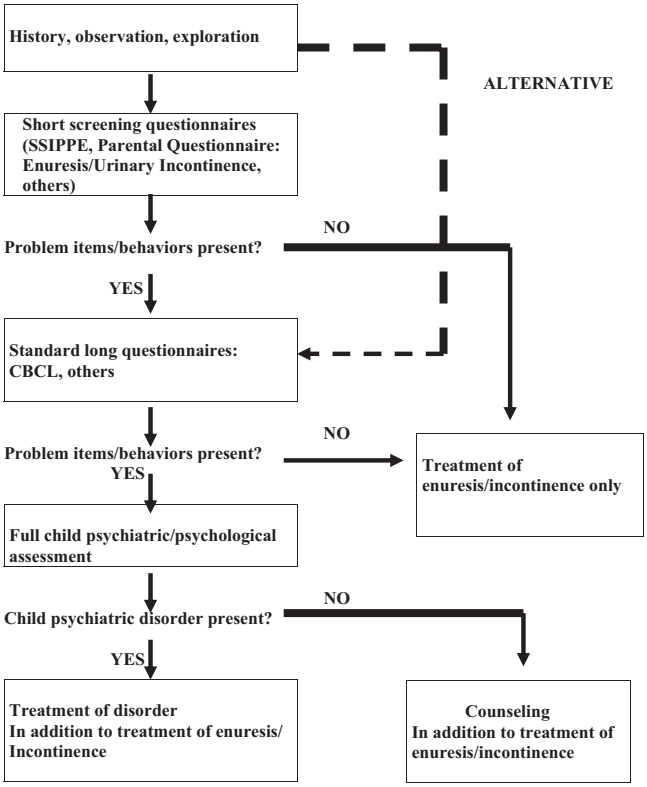
Due to the high comorbidity of psychological symptoms and disturbances, every child should be screened as part of routine assessment. The best screening procedures include a good history and careful clinical observation. In addition, questionnaires are an efficient way to gather information from diverse informants, but they cannot provide a diagnosis.

The CBCL is a widely used parental questionnaire that contains 113 empirically derived behavioral items and has been translated into many languages.[29] However, any other validated, established

broadband behavioral questionnaire can be used if national norm values are available (T-scores).

Shorter screening instruments derived from the CBCL, such as the SSIPPE questionnaire, consisting of 7 items for emotional problems, 3 for attention problems and 3 for hyperactivity/impulsivity, have been validated.[30] Any other validated broadband parental behavioral screening questionnaire can be used at this stage alternatively. If one chooses a short screening questionnaire first, then problem items should be followed by a more detailed evaluation with the CBCL (or similar) questionnaire. If many items are checked as being present or the T-scores are in the clinical range, a comprehensive child psychiatric/psychological assessment should follow (see figure). A child psychiatric assessment is a professional procedure with the goal of determining whether a diagnosis is present or not according to the standardized classification schemes (ICD-10 or DSM-IV). The assessment consists of a detailed history, observation and exploration of the child, a mental state examination, questionnaires, and intelligence and other formal psychological tests. Only after the diagnostic process has been completed and discussed with the parents and the children should therapeutic interventions be planned.

For most children with incontinence, a symptom oriented approach is sufficient. However, if another co-occurring child psychiatric disorder is present, additional interventions such as counseling, psychotherapy and pharmacotherapy may be necessary. The decision should be based on evidence-based practice parameters or guidelines. The interventions are usually performed on an outpatient basis, or in more severe cases in day clinics or inpatient child psychiatric hospitals.



Flow chart for assessment of psychological symptoms (subclinical) or disorders (clinical). Specific treatment for enuresis/incontinence is same for all children. Those with symptoms require counseling, those with disorders need treatment.

SUMMARY AND RECOMMENDATIONS

Children with enuresis and/or daytime urinary and/or fecal incontinence have a higher risk of behavioral disorders than continent children. As outlined 20% to 30% of children with enuresis, 20% to 40% with daytime urinary incontinence and 30% to 50% with fecal incontinence fulfill the criteria for psychiatric disorders as classified in the ICD-10 or DSM-IV.[2–4] Many more children are distressed by wetting and show subclinical symptoms. Unrecognized psychological issues will interfere with the treatment of incontinence and result in less favorable outcomes. Therefore, all children with enuresis/incontinence should be screened for psychological and psychiatric issues. Practical recommendations are shown in the flow chart depicted in the figure.

It is recommended that all professional caregivers should familiarize themselves with basic aspects of psychological and behavioral issues that can affect children with enuresis/incontinence. We would encourage all caregivers to actively ask questions pertaining to the child's behavior as an integral part of history taking.

At a minimum a short validated screening questionnaire such as the SSIPPE (or any alternative parental questionnaire) should be completed by every parent.[30] Alternatively longer questionnaires such as the CBCL can be used directly.[29] If no problem items are checked and no obvious behavioral problems have become apparent during the initial assessment then the recommendation is to concentrate on the treatment of the enuresis/incontinence only.

If more than 2 yes items per section (SSIPPE) are checked, parents should fill out a long validated questionnaire such as the CBCL (or other comparable questionnaires). One can use the questionnaire clinically by looking at the checked items, or one can calculate the scores for the 3 composite (internalizing, externalizing, total behavior) and 8 specific syndrome scales. If many items are checked with a 2 (very true or often true) or the T-scores for the scales

are in the clinical range, a full child psychiatric/psychological assessment should follow. If the CBCL does not reveal relevant behavioral issues, the enuresis/incontinence can be treated without further assessment.

The child psychiatric/psychological assessment should come to or exclude a ICD-10 or DSM-IV diagnosis. If no diagnosis is present, counseling will suffice. If a diagnosis is present, counseling or treatment options should be discussed with parents and child, and instituted if indicated. Evidence-based practice parameters and guidelines should be followed.

In any case counseling and child psychiatric/psychological treatment is offered in addition to any specific treatment of enuresis/incontinence as outlined in other ICCS documents. Psychological intervention and incontinence treatment are integral parts of the care of children and their families. They can enhance and complement each other to ensure that optimal care and best outcomes are achieved.

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EDITORIAL COMMENT

The guidelines for evaluating psychological and psychiatric issues in urinary and fecal incontinence, as published in this article, propose to evaluate every child by means of a parent completed questionnaire. A comprehensive overview of the literature leads the authors to conclude that a significant subset of children with any form of incontinence has subclinical or manifest behavioral problems. While this is well documented in children with daytime urinary and fecal incontinence, the evidence is not convincing for young children with primary monosymptomatic enuresis. The co-occurence of behavioral problems in children presenting with monosymptomatic nocturnal enuresis is not different from the general population, estimated as 12% to 14% (reference 7 in article). Others identify only children older than 11 years and with previous therapy failure at higher risk for behavioral comorbidity (reference 5 in article). Except for ADHD, it is unknown how this behavioral comorbidity affects the 60% cure rate of alarm therapy, but it certainly does not exclude a trial as first line therapy.

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REPLY BY AUTHORS

Population based studies have shown repeatedly that behavioral comorbidity is higher in secondary than in primary nocturnal enuresis, which can be assessed easily by questionnaire. The diagnoses of monosymptomatic nocturnal enuresis and nonmonosymptomatic nocturnal enuresis, defined by the absence or presence of lower urinary tract symptoms, require more detailed clinical assessment. Therefore, reliable representative data are lacking. In our first clinical study we were able to show that children with primary monosymptomatic nocturnal enuresis had a comorbidity rate of only 10% compared to 34% in primary nonmonosymptomatic nocturnal enuresis and 75% in secondary nocturnal enuresis (including monosymptomatic nocturnal enuresis and nonmonosymptomatic nocturnal enuresis) (reference 7 in article). This does not mean that comorbid disorders do not exist in primary monosymptomatic nocturnal enuresis. They are simply no more common than in nonwetting children. Unfortunately these results have not been replicated at other centers.

In our second study children with nonmonosymptomatic nocturnal enuresis did have higher rates than those with monosymptomatic nocturnal enuresis (33% vs 24%) but the difference did not reach statistical difference (reference 8 in article). As it is likely (but not settled) that true primary monosymptomatic nocturnal enuresis carries the lowest comorbidity rate, we would endorse screening all children in this risk population of nocturnal enuresis and daytime urinary incontinence (and not excluding any subgroups) to avoid missing individual children who might profit from additional counseling and treatment. The second statement is correct. Research has focused on ADHD, and has neglected other important comorbid disorders such as ODD, anxiety and depressive disorders, and their effects on alarm treatment, which is the most effective form of therapy for nocturnal enuresis.