Eur Child Adolesc Psychiatry (2013) 22 (Suppl 1):S61–S67
DOI 10.1007/s00787-012-0363-9

REVIEW

The impact of DSM-5 and guidelines for assessment and treatment of elimination disorders

Alexander von Gontard

Published online: 18 December 2012

Abstract Elimination disorders are very common in children: 10 % of 7-year-olds wet at night (nocturnal enuresis), 2–3 % during daytime (diurnal urinary incontinence) and 1–3 % soil (faecal incontinence). In the past decades, many subtypes of elimination disorders have been identified with different symptoms, aetiologies, comorbid disorders and specific treatment options. The aim of the paper is to present a short overview of the proposed DSM-5, the ICCS and the Rome-III classification systems, of assessment and of treatment. The DSM-5 criteria no longer reflect current research data and a revision is needed. Classification systems of the International Children's Incontinence Society (ICCS) for enuresis and urinary incontinence and the ROME-III criteria for functional gastrointestinal disorders offer new and relevant suggestions for both clinical and research purposes. Assessment of most elimination disorders can be performed in paediatric and child psychiatric primary care settings. The standard assessment consists of a thorough history, frequency/volume charts, specific questionnaires, a full physical examination, sonography and urinalysis. If possible, a child psychiatric assessment is performed. In all other settings, screening with a validated behavioural questionnaire and referral if indicated is recommended. All other investigations are indicated only in complicated cases and if an organic cause is to be ruled out. Treatment is symptom oriented and based on the exact diagnosis of the type of elimination disorder. Counselling is recommended in every case. Most elimination disorders can be treated by specific treatment programmes integrating cognitive-behavioural elements. Nocturnal enuresis is best treated with alarms. Medication can be indicated in nocturnal enuresis (desmopressin), urge incontinence (anticholinergics such as oxybutynin, propiverine, etc.) and faecal incontinence with constipation (polyethylene glycol). Comorbid behavioural and emotional disorders require additional treatment.

Keywords Nocturnal enuresis · Daytime urinary incontinence · Encopresis · Faecal incontinence · Guidelines for assessment · Guidelines for treatment · DSM-5 · Rome-III · ICCS

Introduction

Elimination disorders comprise a heterogeneous group of disturbances. They are very common in childhood; thus, 10 % of 7-year-olds wet at night (nocturnal enuresis), 2–3 % during daytime (diurnal urinary incontinence) and 1–3 % soil (encopresis or faecal incontinence) [1]. Although they are distressing for children and parents and are associated with significant comorbid psychopathology, they have been neglected by academic child psychiatry. A vast majority of research has been generated by other disciplines such as general paediatrics as well as the subspecialities of paediatric urology, nephrology and gastroenterology. The most comprehensive overview of these developments was compiled by von Gontard and Neveus [1]. They were recently summarised and updated for the IACAPAP textbook of child psychiatry [2, 3]. Unfortunately, many of these new innovations have not yet been absorbed by child psychiatry and have not been integrated into the classification proposals of DSM-5.

A. von Gontard (✉)
Department of Child and Adolescent Psychiatry,
Saarland University Hospital, 66421 Homburg, Germany
e-mail: alexander.von.gontard@uks.eu

The aim of this paper is threefold: (1) to provide a short critique of the DSM-5 criteria and discuss alternative ICCS and Rome-III classification systems [4, 5]; (2) to present a short overview of guidelines for assessment; and (3) to discuss guidelines and evidence for treatment.

DSM-5 classification proposals

A detailed discussion of the DSM-5 criteria was published recently in European Child and Adolescent Psychiatry [6]. Since then, only the DSM-5 proposals for enuresis have been modified, while those of encopresis have remained unchanged from DSM-IV. Therefore, only the main points shall be summarised.

Enuresis

The DSM-5 criteria for enuresis (L 00) seem to be relatively straightforward at first glance, but they are not up to date and include several problematic aspects (see Table 1):

- Enuresis is used as an umbrella term for both wetting during day, as well as nighttime
- Nocturnal enuresis is always involuntary
- The frequency of two times per week is too restrictive—many children needing treatment would be excluded
- The impairment criterion is not defined; it is too vague and open to subjective biases
- The duration criterion of 3 months is useful clinically
- The chronological age criterion of 5 years is accepted internationally; however, children with intellectual disability can be treated effectively from the age of 5 years onwards as well, so that the suffix of developmental age is not needed
- Although organic causes have to be ruled out, those conditions mentioned are not the most relevant in clinical practice (these are urinary tract infections, vesico-ureteral refluxes, structural anomalies such as posterior urethral valves, neurological causes such as tethered cord syndrome, etc.)
- Subtypes consist of nocturnal and diurnal enuresis only, but not of combined day and nighttime wetting, primary versus secondary or monosymptomatic versus non-monosymptomatic enuresis, or the many subtypes of daytime urinary incontinence

In contrast, the ICCS (International Children's Continence Society) classification system can be regarded as the best current, evidence-based international and interdisciplinary consensus [4]. A revision is underway and will be published in 2013. It has become mandatory at international meetings and for publication in many journals. The main assets and definitions of the ICCS system shall be summarised (see Table 2).

- It is descriptive, clinical, not based on invasive investigations and compatible with the terminology of adults
- Urinary incontinence is the general term for any "uncontrollable leakage of urine", which can be continuous (rare) or intermittent (common).
- Enuresis (or nocturnal enuresis) means any intermittent incontinence while sleeping (at night or during daytime naps), regardless of any underlying pathology. Four subtypes can be differentiated (Table 2).
- Primary enuresis means that the child has been dry for less than 6 months.
- Secondary enuresis means that a relapse after a dry period of at least 6 months has occurred.
- Children with enuresis who do not have daytime signs and symptoms of bladder dysfunction suffer from monosymptomatic enuresis.
- If bladder symptoms are present during the day, the enuresis is called non-monosymptomatic.
- Children with combined daytime and nighttime wetting have dual diagnoses: the subtype of daytime urinary incontinence and enuresis.
- Daytime urinary incontinence is mainly functional—organic causes have to be ruled out, but are much less common. The term 'diurnal enuresis' is obsolete.

Table 1 Diagnostic criteria for enuresis (L 00) according to DSM-5

A. Repeated voiding of urine into bed or clothes (whether involuntary or intentional).
B. The behaviour is clinically significant as manifested by either a frequency of twice a week for at least three consecutive months or the presence of clinically significant distress or impairment in social, academic (occupational) or other important areas of functioning.
C. Chronological age is at least 5 years (or equivalent developmental level).
D. The behaviour is not due exclusively to the direct physiological effect of a substance (e.g. a diuretic or an antipsychotic medication) or another medical condition (e.g. diabetes, spina bifida, a seizure disorder).
Subtypes
Nocturnal only—passage of urine only during nighttime sleep
Diurnal only—passage of urine during waking hours

Table 2 Classification of enuresis, functional urinary incontinence and faecal incontinence with main distinguishing symptoms according to the ICCS (International Children's Continence Society) [4]

Type of nocturnal enuresis	Main symptoms and features
Primary monosymptomatic nocturnal enuresis (PMNE)	Intermittent incontinence during sleep, no signs of bladder dysfunction[a] during daytime, maximal dry interval <6 months
Secondary monosymptomatic nocturnal enuresis (SMNE)	Intermittent incontinence during sleep, no signs of bladder dysfunction[a] during daytime, maximal dry interval >6 months
Primary non-monosymptomatic nocturnal enuresis (PNMNE)	Intermittent incontinence during sleep, bladder dysfunction[a] during daytime, maximal dry interval <6 months
Secondary non-monosymptomatic nocturnal enuresis (SNMNE)	Intermittent incontinence during sleep, bladder dysfunction[a] during daytime, maximal dry interval >6 months
Type of daytime functional urinary incontinence	
Overactive bladder (OAB) and urge incontinence	Urge symptoms, increased daytime voiding frequency and small voided volumes
Voiding postponement	Infrequent micturitions <5 times per day, postponement
Dysfunctional voiding	Straining to initiate and during micturition, interrupted stream of urine
Stress incontinence	Wetting during coughing, sneezing, small volumes
Giggle incontinence	Wetting during laughing, large volumes with apparently complete emptying
Underactive bladder	Interrupted stream, emptying of bladder possible only by straining
Vaginal reflux	Wetting exclusively 5–10 min after normal micturition due to vaginal reflux
Obstruction	Impediment (can be functional) to urine outflow, decreased urine flow
Diurnal urinary frequency of childhood	Benign, self-limiting condition with typical signs of frequency and urgency

[a] Such as increased/decreased daytime voiding frequency, urgency, voiding postponement, holding manoeuvres and intermittent urine stream

Table 3 Diagnostic criteria for encopresis according to DSM-5

A. Repeated passage of faeces into inappropriate places (e.g. clothing or floor) whether involuntary or intentional.

B. At least one such event a month for at least 3 months.

C. Chronological age is at least 4 years (or equivalent developmental level).

D. The behaviour is not due exclusively to the direct physiological effects of a substance (e.g. laxatives) or general medical condition except through a mechanism involving constipation

Code as follows

787.6 With constipation and overflow incontinence: there is evidence of constipation on physical examination or by history

307.7 Without constipation and overflow incontinence: there is no evidence of constipation on physical examination or by history

No changes from DSM-IV

Table 4 ROME-III diagnostic criteria for functional constipation and non-retentive stool incontinence (summary) [5]

Type of soiling	Main symptoms and features
Functional constipation	≤2 defecations in the toilet per week; ≥1 episode of faecal incontinence per week; retentive posturing or excessive volitional stool retention; painful and hard bowel movements; large faecal mass in the rectum; large diameter stools that may obstruct the toilet
Non-retentive faecal incontinence	≥1 defecation into inappropriate places to the social context at least once per month; no inflammatory, anatomic, metabolic or neoplastic process that explains the subjects symptoms; no faecal retention

Other criteria: age 4 years, duration 2 months, two or more symptoms for functional constipation, all for non-retentive faecal incontinence, exclusion of irritable bowel syndrome

- Daytime functional urinary incontinence is a heterogeneous group of disorders.
- The most common disorders are overactive bladder (OAB) or urge incontinence, voiding postponement and dysfunctional voiding.
- Typical delineating symptoms are summarised in Table 1 (see [1–3] for detailed overviews).

The differentiated ICCS classification system provides the basis for specific treatment approaches: each of these subtypes requires an individual therapy for optimal results.

Encopresis

The DSM-5 criteria of encopresis (L 01) have not been revised—they are the same as those of DSM-IV (Table 3). There are less critical issues compared to those of enuresis [6].

- The passage of faeces can, indeed, be both voluntary and involuntary in encopresis.
- The incidence of one event per month is useful clinically and will include those children in need of treatment.
- Also, the duration of 3 months is adequate.
- The age criterion of four chronological years is, again, accepted internationally. The suffix 'developmental age' is no longer needed, as 5-year-old children with intellectual disability can be treated effectively.
- Medical conditions have to be ruled out. The most important differential diagnosis (Hirschsprung's disease) should be mentioned.
- The two subtypes—with and without constipation—are still most important for diagnosis.
- However, the term constipation has not been defined precisely in DSM-5.

Based on current research, paediatric gastroenterologists have compiled new diagnostic criteria for functional gastrointestinal disorders, known as Rome-III criteria [5]. The main points of these recommendations are the following (see Table 4):

- The neutral term of faecal incontinence was chosen instead of encopresis
- Constipation was defined by detailed specifications, including number of signs and symptoms, frequency and duration.
- Functional constipation is seen as the main, overriding disorder, which can, but does not necessarily, co-exist with faecal incontinence.
- Non-retentive faecal incontinence is a completely separate disorder, which precludes any sign of constipation.

The Rome-III complements the DSM-5 criteria well. They should be added in clinical practice and are required for research and publication purposes.

Assessment guidelines

Separate recommendations for the assessment of daytime urinary incontinence were published recently by the ICCS [7]. All other diagnostic recommendations have been included in treatment guidelines [8–13].

There is a general consensus that assessment should be simple to perform, clinically oriented and non-invasive. Invasive diagnostics should be avoided. They are not needed routinely, but have a clear indication if organic causes of urinary and/or faecal incontinence are suspected and have to be ruled out. Overall, children with daytime urinary and faecal incontinence, as well as with non-monosymptomatic nocturnal enuresis, need a more detailed assessment than those with monosymptomatic enuresis.

Basic components of the assessment process are shown in Table 5. A careful history is definitely the key component. Volume–frequency charts (with measurement of voiding and drinking frequency and volumes, as well as wetting episodes over 48 h) offer essential diagnostic information and should always be part of routine assessment. Questionnaires can complement the information gained. In every case, a full paediatric physical examination is required. At least one urinalysis is recommended to rule out urinary tract infections. In faecal incontinence alone, the volume–frequency chart and urinalysis can be omitted. Sonography is a very useful tool not only to exclude structural malformations, but also to detect functional changes in bladder wall thickness, residual volume and rectal diameter. It is recommended at a minimum in all cases of daytime urinary incontinence [7]. In child psychiatric settings, a full assessment is performed due to the high comorbidity rates: 20–30 % of children with nocturnal enuresis, 30–40 % of those with daytime urinary incontinence and 30–50 % of those with faecal incontinence are affected with comorbid behavioural and emotional disorders [14]. In all other settings (such as paediatrics and urology), the ICCS recommends a screening with standardised, validated questionnaires [14].

Treatment guidelines

In addition to systematic reviews (such as the Cochrane reviews), a wide spectrum of treatment guidelines of differing quality and level of evidence has been published, commissioned by various professional societies and organisations. Most of these deal with nocturnal enuresis only [8–10, 15]. Only few cover nocturnal enuresis and daytime urinary incontinence [12] or faecal incontinence

Table 5 Assessment of elimination disorders

Enuresis and functional urinary incontinence	Encopresis
Standard	
History	Same
Volume–frequency chart	Only with combined enuresis/ urinary incontinence
Questionnaires and scales	Same
Paediatric examination	Same
Urinalysis	Only with combined enuresis/ urinary incontinence
Sonography	Same
Screening or child psychiatric assessment	Same
Extended	
Uroflowmetry with EMG	Stool bacteriology
Urine bacteriology	Radiology: plain abdominal x-ray
	Colon contrast X-ray
	MRI of colon
Extended urodynamic, urological, radiological examinations	Manometry
	Endoscopy and biopsy

Table 6 General treatment components of elimination disorders

Urotherapy
Counselling
Provision of information
Charts
Change of toileting and drinking habits
Cognitive-behavioural interventions
Alarm treatment
Relaxation methods
Biofeedback
Group therapy
Medication
Desmopressin
Anticholinergics (oxybutynin, propiverine, etc.)
Laxatives (PEG, enemas)

and constipation [13, 16, 17]. Also, guidelines of specific conditions such as monosymptomatic enuresis [10] or dysfunctional voiding [11] have already been published by the ICCS or are in preparation.

In general, most interventions can be provided in primary care settings. Most children can be treated on an outpatient basis. Referral to secondary or even tertiary centres is required in complicated, protracted or treatment-resistant cases. The following general principles should be followed:

- A child should be at least 4 years of age with faecal incontinence or 5 years with enuresis and urinary incontinence—younger children do not require treatment.
- The treatment should always be symptom orientated, aimed at achieving continence (i.e. complete dryness).
- Primary psychotherapy for enuresis, or urinary or faecal incontinence is not effective and not indicated
- Comorbid emotional and behavioural disorders should be treated separately according to evidence-based recommendations.
- In combined disorders, encopresis and constipation should be treated first, as many children will stop wetting once these problems have been dealt with.
- Daytime incontinence should be treated second, as many children will stop wetting at night once the daytime problems have been treated
- In non-monosymptomatic enuresis, all daytime bladder problems should be tackled first (according to the treatment principles of urinary incontinence) before starting the specific treatment for enuresis.
- Primary and secondary enuresis are treated in the same way.

The basic treatment components of elimination disorders are summarised in Table 6. Counselling and provision of information are key aspects in every case. Combined with registration of wet and dry episodes, these ‘simple’ interventions are sufficient and successful for subgroups of children. Change in toileting habits (such as timed voiding) or augmenting oral fluids can be very effective. Toilet training (regular sitting on the toilet after mealtimes) is the main component in the treatment of faecal incontinence. A majority of interventions in ‘urotherapy’ employ cognitive-behavioural techniques. Alarm treatment (an operant conditioning) is the most effective treatment for nocturnal enuresis [9, 10, 12]. Relaxation techniques can be useful adjuncts for many children. Biofeedback is indicated for dysfunctional voiding [11]. Finally, multimodal group therapy has gained an important place in the treatment of therapy-resistant cases [18, 19]. Medication can be indicated in nocturnal enuresis (desmopressin), urge incontinence (anticholinergics such as oxybutynin and propiverine) and faecal incontinence with constipation (polyethylene glycol) [9, 10, 12, 13, 16]. Comorbid behavioural and emotional disorders require additional treatment [14].

These general treatment components are combined specifically for each of the individual disorders, as shown in Table 7. Due to the scope and limitations of this article, only treatment recommendations for nocturnal enuresis will be presented. Due to a multitude of randomised controlled trials, systematic reviews and meta-analyses,

Table 7 Specific treatment components of elimination disorders

Type of nocturnal enuresis	
Primary monosymptomatic nocturnal enuresis (PMNE)	Charts, alarm treatment, desmopressin
Secondary monosymptomatic nocturnal enuresis (SMNE)	Charts, alarm treatment, desmopressin
Primary non-monosymptomatic nocturnal enuresis (PNMNE)	Treatment of daytime symptoms, charts, alarm treatment, desmopressin
Secondary non-monosymptomatic nocturnal enuresis (SNMNE)	Treatment of daytime symptoms, charts, alarm treatment, desmopressin
Type of daytime functional urinary incontinence	
Overactive bladder (OAB) and urge incontinence	Charts, cognitive-behavioural therapy (CBT), anticholinergics (oxybutynin, propiverine, etc.)
Voiding postponement	Charts, increase micturition frequency
Dysfunctional voiding	Biofeedback
Stress incontinence	Paediatric urology
Giggle incontinence	CBT, methylphenidate
Underactive bladder	Urotherapy, intermittent catheterisation
Vaginal reflux	Paediatric urology
Obstruction	Paediatric urology
Diurnal urinary frequency of childhood	Same as OAB
Type of faecal incontinence	
Functional constipation	Toilet training, laxatives
Non-retentive faecal incontinence	Toilet training, no laxatives

recommendations for alarm treatment, for example, can be given on the highest level of evidence [20].

'Simple' interventions (counselling, provision of information, changing drinking and voiding habits, charts and simple rewards) should be initiated first [9, 12, 21]. Alarm treatment is the most effective treatment for nocturnal enuresis with 60–70 % of children achieving dryness [20]. It should be offered as the first-line treatment [9, 12]. There is some evidence that additional cognitive-behavioural components can augment the effects of the alarm if needed [12, 22]. Desmopressin is effective, but most children experience a relapse after it is discontinued [9, 10, 12, 23]. As it has a low curative potential, it is the second-line treatment if short-term dryness is required, parents and child are not motivated or do not wish alarm treatment, or a child does not respond sufficiently to alarms [9, 10]. A switchover to the other form of treatment is recommended if either desmopressin or alarms fail and has shown to be effective [10]. Tricyclics also have a proven antienuretic effect, but are not recommended as first- or second-line interventions due to possible side effects [24]. There is no evidence for the effectiveness of other drugs or complementary interventions [25, 26].

Table 7 also provides a short summary of treatment recommendations for daytime functional urinary and faecal incontinence. Further details are provided elsewhere [1–3]. In general, the level of evidence of recommendation is lower in faecal and lowest in daytime urinary incontinence [12, 13, 17]. Table 7 does underline the fact that treatment of elimination disorders must not only be tailored to the needs of the individual child and his/her family, but must be based on an exact diagnosis to be effective.

Outlook

The aim of this article was to provide a critical appraisal of classification systems for elimination disorders. As the DSM-5 proposals do not reflect current research standards, additional systems like those of the ICCS or of Rome-III will be needed. Guidelines for the assessment and treatment of nocturnal enuresis are available on a high level of evidence. Further treatment studies are needed for faecal and especially daytime urinary incontinence. Based on an exact diagnosis, the treatment of many elimination disorders is highly successful.

Conflict of interest The corresponding author states that there are no conflicts of interest. This article is part of the supplement ''The Future of Child and Adolescent Psychiatry and Psychology: The Impact of DSM 5 and of Guidelines for Assessment and Treatment''. This supplement was not sponsored by outside commercial interests.

References

1. von Gontard A, Neveus T (2006) Management of disorders of bladder and bowel control in childhood. MacKeith Press, London

2. von Gontard A (2012) Enuresis. In: J Rey J (ed) IACAPAP Textbook of Child and Adolescent Mental Health, online, 2012; http://iacapap.org/iacapap-textbook-of-child-and-adolescent-mental-health
3. von Gontard A (2012) Encopresis. In: Rey J (ed) IACAPAP Textbook of Child and Adolescent Mental Health. http://iacapap.org/iacapap-textbook-of-child-and-adolescent-mental-health
4. Nevéus T, von Gontard A, Hoebeke P, Hjälmås K, Yeung CK, Vande Walle J, Rittig S, Jørgensen TM, Bower W, Bauer S, Djurhuus JC (2006) The standardization of terminology of lower urinary tract function in children and adolescents: report from the Standardization Committee of the International Children's Continence Society (ICCS). J Urol 176:314–324
5. Rasquin A, Di Lorenzo C, Forbes D, Guiraldes E, Hyams JS, Staiano A, Walker LS (2006) Childhood functional gastrointestinal disorders: child/adolescent. Gastroenterology 130:1527–1537
6. von Gontard A (2011) Elimination disorders—a critical comment on DSM-5 proposals. Eur Child Adolesc Psychiatry 20:83–88
7. Hoebeke P, Bower W, Combs A, De Jong T, Yang S (2010) Diagnostic evaluation of children with daytime incontinence. J Urol 183:699–703
8. Vande Walle J, Rittig S, Bauer S, Eggert P, Marschall-Kehrel D, Tekgul S (2012) Practical consensus guidelines for the management of enuresis. Eur J Pediatr 171:971–983
9. NICE clinical guideline 111 (2010) Nocturnal enuresis—the management of bedwetting in children and young people. National Institute for Health and Clinical Excellence, London
10. Neveus T, Eggert P, Macedo A, Rittig S, Tekgul S, Vande Walle J, Yeung CK, Robson L (2010) Evaluation of and treatment for monosymptomatic enuresis: a standardization document from the International Children's Continence Society. J Urol 183:441–447
11. Chase J, Austin P, Hoebeke P, McKenna P (2010) The management of dysfunctional voiding in children: a report from the standardisation committee of the International Children's Continence Society. J Uro 183:1296–1302
12. von Gontard A (2007) Enuresis und funktionelle Harninkontinenz. In: Schmidt MH, Poustka F (eds) Leitlinien zur Diagnostik und Therapie von psychischen Störungen im Säuglings-, Kindes- und Jugendalter, 3rd edn. Köln, Deutsche Ärzteverlag, pp 327–342
13. von Gontard A (2007) Enkopresis. In: Schmidt MH, Poustka F (eds) Leitlinien zur Diagnostik und Therapie von psychischen Störungen im Säuglings-, Kindes- und Jugendalter, 3rd edn. Köln, Deutscher Ärzteverlag, pp 343–356
14. von Gontard A, Baeyens D, Van Hoecke E, Warzak W, Bachmann C (2011) Psychological and psychiatric issues in urinary and fecal incontinence. J Urol 185:1432–1437
15. AACAP (2004) Practice parameter for the assessment and treatment of children and adolescents with enuresis. J Am Acad Child Adolesc Psychiatry 43:1540–1550
16. NICE clinical guideline 99 (2010) Constipation in children and young people—diagnosis and management of idiopathic childhood constipation in primary and secondary care. National Institute for Health and Clinical Excellence, London
17. Felt B, Wise CG, Olsen A, Kochhar P, Marcus S, Coran A (1999) Guideline for the management of pediatric idiopathic constipation and soiling. Arch Pediatr Adolesc Med 153:380–385
18. Equit M, Sambach H, Niemczyk J, von Gontard A (2013) Blasen- und Darmschulung: Gruppentherapie für Kinder und Jugendliche mit komplexen Ausscheidungsstörungen. Hogrefe, Göttingen
19. Equit M, Sambach H, El Khatib D, Schreiner-Znik S, von Gontard A (2011) Therapieresistente Harninkontinenz und Enuresis. Monatsschr Kinderheilkd 159(565–571):2011
20. Glazener CMA, Evans JHC, Peto RE (2005) Alarm interventions for nocturnal enuresis in children. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD002911
21. Glazener CMA, Evans JHC (2004) Simple behavioural and physical interventions for nocturnal enuresis in children. In: Cochrane Database Syst Rev. CD003637
22. Glazener CMA, Evans JHC, Peto RE (2008) Complex behavioural and educational interventions for nocturnal enuresis in children. Cochrane Database of Syst Rev 2004, Issue 1. Art. No.: CD004668
23. Glazener CMA, Evans JHC (2006) Desmopressin for nocturnal enuresis in children. Cochrane Database Syst Rev 2002, Issue 3. Art. No.: CD002112
24. Glazener CMA, Evans JHC, Peto RE (2007) Tricyclic and related drugs for nocturnal enuresis in children. Cochrane Database Syst Rev 2003, Issue 3. Art. No.: CD002117
25. Glazener CMA, Evans JHC, Peto RE (2007) Drugs for nocturnal enuresis in children (other than desmopressin and tricyclics). Cochrane Database Syst Rev 2003, Issue 4. Art. No.: CD002238
26. Huang T, Shu X, Huang YS, Cheuk DKL (2011). Complementary and miscellaneous interventions for nocturnal enuresis in children. Cochrane Database Syst Rev 2011, Issue 12. Art. No.: CD005230