



# Enuresis and encopresis

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# Enuresis and encopresis: *elimination* disorders

- Essentially they are “developmental” disorders
- I.e. they are related to maturation
- Appear in childhood and often have spontaneous remission
- Interaction of genetic and environmental factors



**Enuresis**



# Diagnostic criteria DSMIV and ICD 10

## ○ DSM IV

- Repeated involuntary and voluntary micturition
- Intellectual and chronological age at least 5 years
- At least twice per week or marked pressure or diminished social and academic functioning
- At least 3 consecutive months
- Exclusion criteria: diabetes mellitus, insipidus, spina bifida, cerebrovascular, neurgenic bladder,

## ○ ICD 10

- Repeated involuntary urination
- Chronological age 5 years, intellectual age at least 4 years
- Not given
- Not given
- Exclusion: epilepsy, neurological incontinence, structural abnormality in neuralpathways, other diseases. Criteria for other mental disorders



# Definition & diagnosis

- Repeatedly urinating on clothes or bed, voluntary or involuntary
- At least 2 per week for 3 months, or significant impact in psychosocial interpersonal functioning
- At least 5 years of age (also in development)
- Not only due to a physical disease (spina bifida, epilepsy, diabetes) or medications (diuretics, SSRI, clonidine, risperidone, valproic)



# Qualifiers

- **Primary enuresis: no “dry “ periods developmentally (no duration given)**

**Secondary enuresis. Period of no bed or clothes wetting (duration not specified)(1, 3, 6 or 12 months, different authors)**



# Differential diagnosis enuresis

- **Urinary incontinence. Usually diurnal, micturition due to dysfunction of the bladder (structural, neurogenic or functional) (Majority of children with urination during the daytime**

(Olbing, 1993)



## Other entities

**-*Idiopathic urge incontinence.*** Intense impulse to urinate, micturition, polakiuria, diminished bladder capacity. Instability of detrusor muscle, spontaneous contraction of the concave-bladder muscle during the filling phase of bladder.(overactive bladder)



## Other entities.

- **Urinary incontinence. Retention of urine due to interruption of urination during micturition.**
- **Strong maneuvers to avoid urinating during the day**



## Other entities

- **Discoordination of detrusor and sphincter in bladder.**
- **Relaxation and paradoxical contraction of the bladder sphincter, during micturition, contraction of the pelvic floor, staccato urination or fractioned micturition, with incomplete emptying of bladder**



## Rare forms

- Incontinence due to pressure. Increased intraabdominal pressure (cough or sneezing)
- Incontinence with laughter. Complete emptying of bladder during laughter
- Lazy bladder syndrome. Decompensation of detrusor muscle, large bladder, hypotonic, irregular and rare micturition and overflow incontinence

# Epidemiology

- **Ankara Study** *Int Braz J Urol. 2007; 33: 216-22,* **1500 school age children**
- **17.5% nocturnal, 1.9% diurnal**
- **Correlation with very deep sleep**
- **Low socioeconomical status**
- **Higher number of children at home**
- **Enuresis in siblings**

# Prevalence: Enuresis

- Age 2- .....-92.5%
- Age 4 .....-29.2%
- Age 5- .....-15.7%
- Age 7 .....-10.3%
- Age 10- ..... 2.5%
- Adolescence- ..... 1.2%
- Adults ..... 0.3-1.7%

○ Von Gontard, 2003



# Epidemiology

- More frequent in boys 1.5 or 2 to 1
- Spontaneous remission about 13.5% per year
- Primary enuresis nocturna is more frequent than secondary
- Diurnal enuresis more frequent in girls



# Physiopathology

- Genetic factors
- Diminished functional capacity of bladder?
- Very “deep” sleep in child
- Difficulty to wake up
- Instability of the vessical sphincter and detrusor muscle
- Greater production of urine during the night
- Actually “wets” the bed, not just humid



# Comorbidity

- Frequent association with psychopathology
- Behavioral and emotional
- No specific association
- Enuresis itself can lower self-esteem and lead to shame and guilt
- Increased stress for the child and family
- Rule out urinary tract infection



# Associations

- Child often delays going to urinate
- Avoid emptying the bladder totally
- Frequent micturitions with small amounts of urine



# Natural course

- Almost all children will eventually stop wetting bed
- Remission about 15% per year?
- Many parents prefer to use only hygienic measures and leave things to their natural course
- There may be a need for “dry bed” some special nights



# Interventions

- Preventive and hygienic general strategies
- Diminish ingestion of liquids after 6 PM
- No caffeinated drinks at night
- Empty bladder before going to sleep
- Wake up child at midnight, to empty bladder before enuresis



# Interventions

- **EXERCISES TO EXPAND BLADDER CAPACITY**
- **Wait to urinate and purposefully retain urine**
- **After a “load” of liquids**
- **Positive reinforcement for retaining urine**
- **Exercises to stop flow of urine during micturition**



# Nocturnal alarm

- The most efficacious method
- Lesser rate of relapse once one stops using it (65% continue dry)
- Alarm and vibration device
- Must be used for several weeks
- Requires awaking during the night
- Child must wake up to change clothes and alarm should be reset

**Requires motivation from child**



# Nocturnal alarm

- Disadvantages
- May awaken siblings
- May frighten the younger child
- Might be activated by sweat, not only urine
- May require from 4 to 12 weeks for success



# Over-learning technique

- Alarm use plus retention of urine
- Once dry bed for two weeks
- Reduces the frequency of relapses
- 500 cc of liquid before going to bed
- Then set the alarm
- Less frequent recurrence of the problem



# Multicomponent treatment

- **Nocturnal alarm + Urine retention + bladder training**
- **The child changes bed sheets, clothes, sets the new clean sheets, resets the alarm before sleeping again**
- **Lower relapse rate**



# The “dry bed” regime

- Intensive procedure at beginning
- Overload of liquids during the night
- Wake up child to urinate every hour
- Praise for not wetting the bed



## Other strategies

- **Magnetic stimulation of the pelvic floor**
- **Strengthening of the sphincterian muscles.**



# Pharmacological treatments

- **Desmopresine or antidiuretic hormone**
- **(DDAVP)**
- **Administered at night, reduces production of urine**
- **Preferable for short term a few months**
- **High efficacy 70% remission whilst the medicine is being used**
- **High rate of relapse after its discontinuation**

# Risks of desmopresine

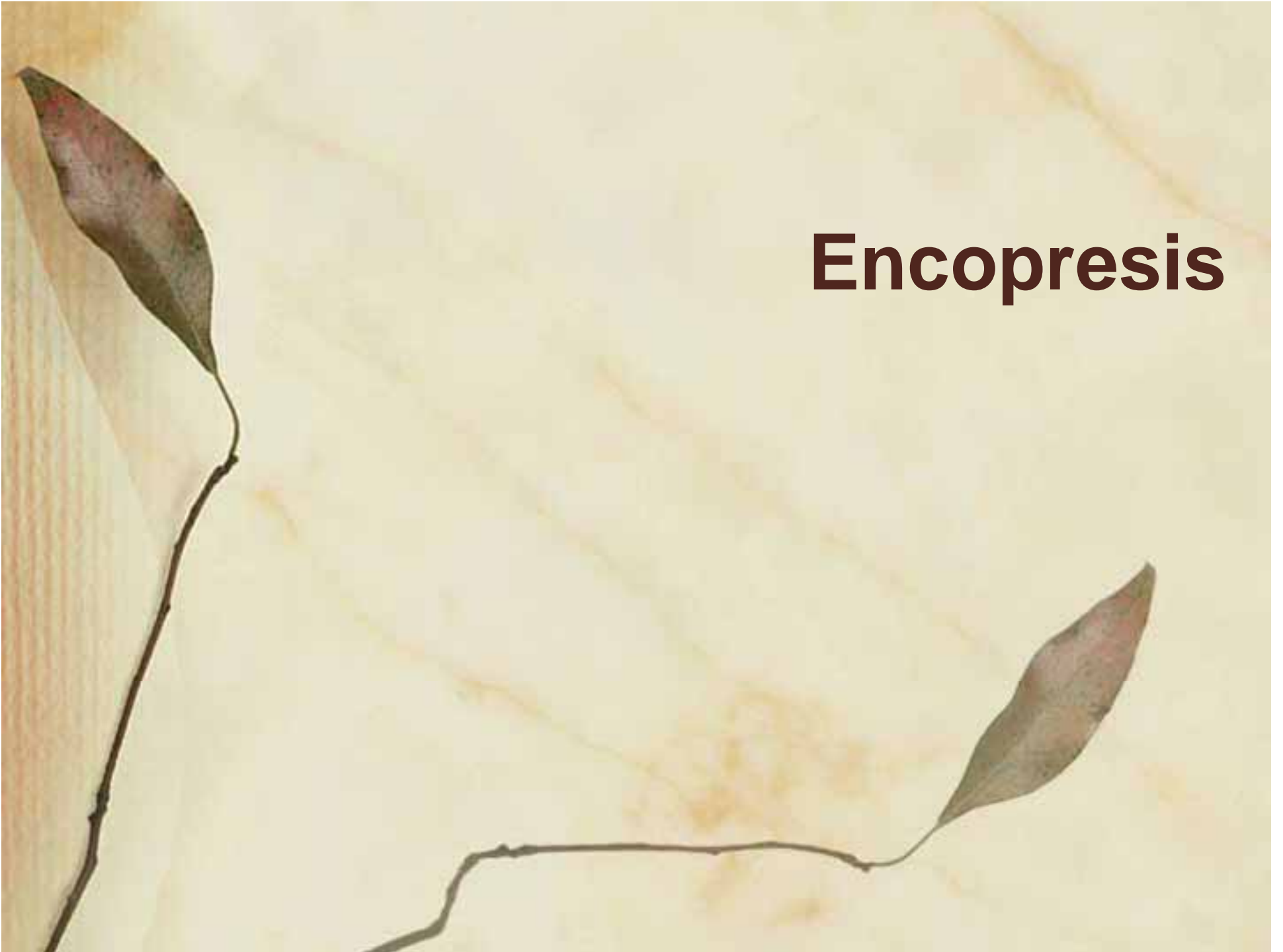
- Initial dose in children: 2 sprays each of 10 micrograms cada or 20 micrograms, for those over 6 years old. If not effective, 40 micrograms
- If less than 6 years old, dose of 10 micrograms
- Risk of water intoxication with desmopresine
- Risk of hyponatremia and seizures
- no studies of long term effects



# Medications

- Tricyclic antidepressants
- Imipramine, desipramine
- Increase the tone of the bladder sphincter
- High efficacy rate while the medication is being used
- Caution with cardiac effects (block of the atrioventricular node)  
Previous electrocardiogram is useful

# Encopresis





# Definition<sup>De</sup>

- Deposit of feces in inappropriate places
- (underware, floor, closet, others)
- Age at least 4 años (or equivalent developmentally)
- Voluntary or involuntary defecation
- Not due to effects of substances (laxatives) or physical condition (except constipation)



# definition

- **Encopresis**

- **with constipation and overflow incontinence**

- **Without constipation and overflow incontinence**



# Diagnostic criteria ICD 10 and DSM IV

- ICD

- Voluntary or involuntary deposition of feces in place not intended for that purpose

- DSM IV

Repeated involuntary (rarely voluntary) deposition of stool in place not intended



# Diagnostic criteria ICD 10 and DSM IV

- ICD 10

- Chronological or develop. Age 4

- 1 time per month

- Duration 6 months

- DSM IV

- Chronological age 4

- 1 time per month

- Duration 3 months



# Diagnostic criteria ICD 10 and DSM IV

- ICD 10
  - EXCLUSION: Spina bifida, *megacolon congenitum*, other diseases.
  - Encopresis is dominant problem
  - Dx encopresis, if coexists with enuresis
- DSM IV
  - EXCLUSION
  - Not produced by substances (e.g. laxatives) or a general medical condition



# Definition

- More frequent in boys than girls
- In preschool age, frequent reason for consultation, of “primary type”, the child has never learned to deposit feces in the right place
- In the school age and adolescent, often secondary type



# Manifestations

- **Younger child**
- **Does not want to defecate in “potty chair” or toilet**
- **Does not want to be a “big boy”**
- **Is afraid of going to the restroom**
- **Is hurt by the passage of feces through rectum**



# Manifestations

- The child says he does not feel passage of feces
- Does not notice the smell (when others do)
- Does not feel clothes have feces
- Tries to hide problem, hiding soiled clothes or feces themselves



# Manifestations

- Child says he does not need to go to toilet
- Says there are no feces on clothes, although obviously there are
- Denies it is a frequent problem
- Angry when confronted or denies it is a problem



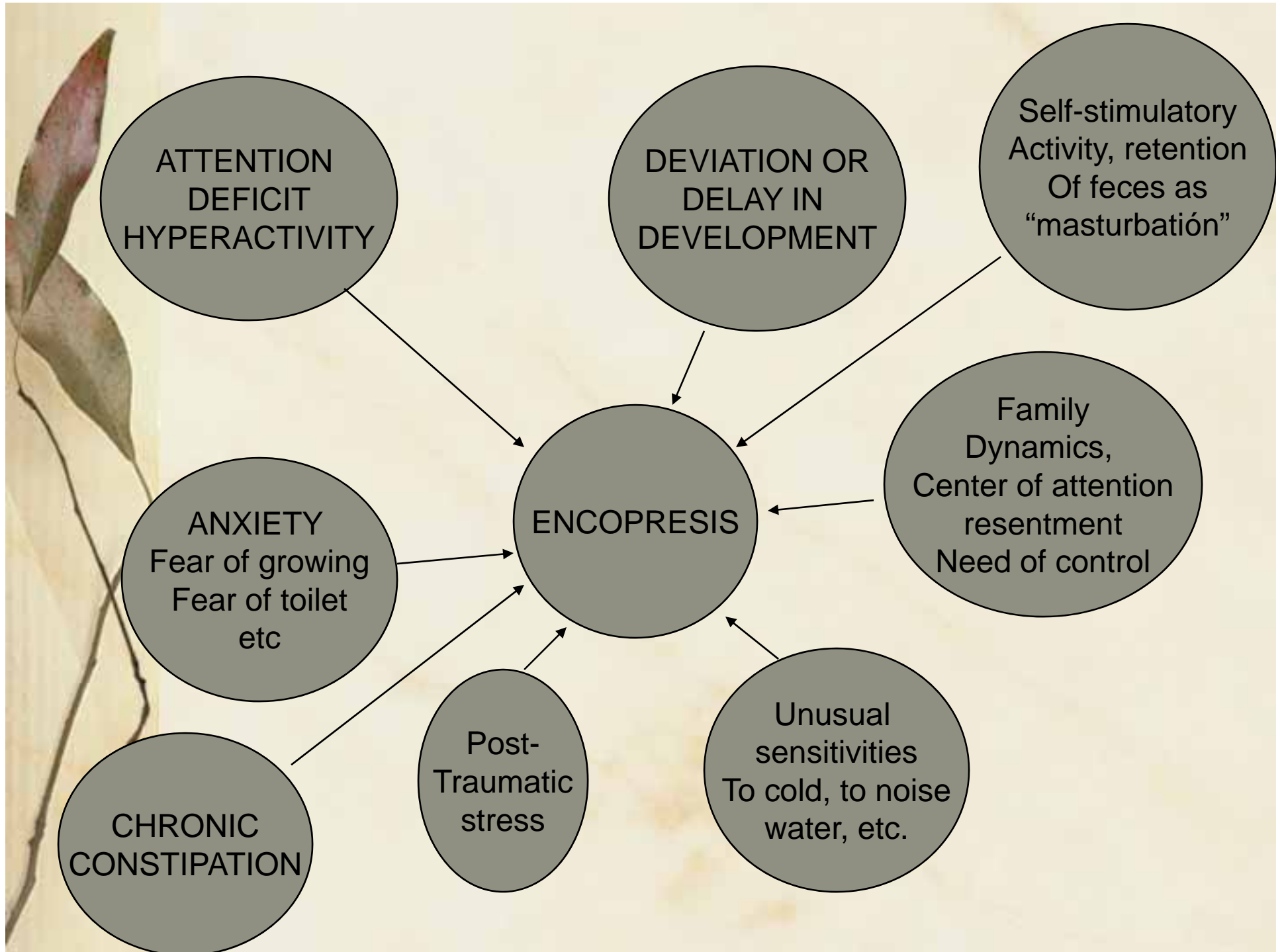
# Epidemiology


- Over 90% of 2 year old children defecate on clothes
- 2.8 of 4 year olds
- 1.3 of 10 year olds



# Intervention

- **First step, evaluation of problem (duration, frequency severity, degree of interference with everyday life**
- **Evaluation of the total functioning of the child. Are there other problems?**





# Encopresis and attention deficit

- Little awareness of body
- Does not attend to somatic signals
- Distracted during play and does not go to defecate on time
- Defecation in the “last minute”
- Not clean self correctly, or in a hurry to finish defecation



# Encopresis and constipation

- Constipation from other causes
- Diet little fiber, little exercise, dry foods, scarce vegetables, etc.
- Child makes efforts to retain feces
- Tighten buttocks to impede passage of feces
- Push feces back into rectum
- Pain with defecation



# Chronic constipation

- **Difficulty to defecate normally, several days without**
- **Avoidance to do it due to pain**
- **“overflow” due to impaction of old feces in rectum**
- **Small and semi-fluid evacuations, often unnoticed**




## **With other delays or deviations in development**

- Lack of awareness of body sensations**
- Sensations may not lead to logical consequences i.e. defecation**
- Fear of changes, used to routine, learn new things**




## Encopresis and unusual sensitivities

- Fear of cold temperature of toilet
- Fear of noise of “pulling the chain”
- Avoids sensations of defecation, particularly if constipated
- Difficulty to remain seated, and lack of patience to wait for evacuation




# Encopresis and self-stimulation

- Interest in “playing” with defecation
- Need to control the feces “almost out” but return
- Pleasure to contract the gluteal muscles
- Return the feces upward with fingers or hand
- Accostumed to the feeling of “fullness” with feces



# Encopresis with anxiety

- Fear of the toilet
- Fear of “letting go” of feces
- Fear of falling into toilet
- Fear of going “down the tubes”
- Worry that an animal may get out from the toilet
- Memory of previous traumatic event



# Encopresis and family dynamics

- The child has this “specialty” in the family
- Special role. Everybody worries if he/she might defecate on clothes
- To get attention is preferable to not
- Difficulty to abandon this special role



# Encopresis and family dynamics

- Sensation of control, when one cannot control other things
- Resentment toward caregivers
- Feces on drawers, furniture, vents of air conditioner, etc.
- Encopresis becomes “the identity” of the child



# Interventions

- Rule out a primarily medical problem
- Lack of sensibility in anal area
- Difficulty to control sphincters due to poor perception or coordination
- Another cause of constipation
- Malformación in the bowel, rectum, anus, etc.



# Obtain the history of the problem

- **Duration, if there was a time when in control**
- **Reactions toward defecations**
- **Previous attempts at resolution**
- **Frequency, if at school, home or both**
- **Regularity or irregularity of problem**



# Interventions

- Take records of the previous two weeks
- what, how, when, where
- Behavioral sequences around evacuations
- E.g. who washes the feces, who cleans the child, what happens afterward



# Interventions

- Cognitive and behavioral strategies with positive reinforcements
- If possible, motivate and get cooperation for child
- Draw a “neutral” behavioral plan, without much emotinal intensity
- Planes de contingencia, generalmente de consecuencias positivas por cooperación



# Interventions

- **Go to the toilet periodically and stay there a few minutes**
- **reward for sitting there**
- **Points or positive marks for sitting or defecating**
- **Points for attempting to do it**



# Interventions

- Often a laxative is required, often at beginning, or an enema
- A laxative may be necessary for long term
- Changes in diet, increased amount of fibers or vegetable,
- Attempt to establish positive hygienic habits
- It may be necessary to teach child to "clean up"



# Other interventions

- Depending on the dynamics observed
- If anxiety, alleviate anxiety
- Visualization
- Gradual approximation to feared stimulus
- Small steps toward feared object
- A medication for anxiety may be required



## If family factors

- Avoid “cat and mouse” interactions
- Focus attention of child even without feces
- Diminish importance of the topic
- Work toward a positive relationship based on positive interactions
- Develop other areas of “specialization”



# If themes of control

- Give the child the sensation of control in other areas
- Symbolic games where the child is in control
- Attempts to diminish resentment
- Expressing anger in alternative forms , verbalization, play, other behaviors




## If additional factors

- Increase capacity for attention
- Be able to stop playing at the right time
- Go to the bathroom with enough time
- Promote greater abilities for self-control
- Diminish associated adverse stimuli, coldness of toilet, noise, etc.



# If fear of growing

- Stimulate with to be a big boy or girl
- Convince it is not dangerous to grow
- Underline advantages of being an older child
- Games in which one grows and “ungrows” (Alice in Wonderland)
- Parents might prefer a child who acts according to age



## If negative consequences have to be used

- “natural” consequences accompanied by much support and affection
- In general brief and related to an episode
- Not going out to play today
- Washing the soiled item
- Not obtaining prize
- Not go to an outing
- Not watch television today, etc.