Enuresis

Definition and Epidemiology
- Involuntary repeated discharge of urine after a developmental age when bladder control should be established.
- Most children have obtained bladder control during the day and night by the age of 5 years.
- About 5-8% of school children are enuretic, the incidence decrease with age to 1% at 18 years.
- Bedwetting is twice more common in males than in females.
- Family history is positive for similar condition in at least one family member in about 70% of cases.

Classification
- **Primary**: the child has never been dry at night. It represent 90% of all cases.
- **Secondary**: the child who has been continent for at least one year then return to wet the bed again.
- Enuresis is nocturnal in > 85% of all cases.
- Diurnal enuresis is more common in girls, and the most common cause is waiting until the last minute to void the urine.
- In both nocturnal and diurnal enuresis organic pathological causes can be found only in a very small number of cases.

Management
- Proper physical examination, psychosocial evaluation and urinalysis might suggest specific causative factor. Cystoscopy and Urography should not be done unless there is some indication of organic lesion.
- General principles can help:
  1. Rewarding the child for being dry.
  2. Laundering soiled bed clothes and pajamas.
  3. Voiding before retiring to bed.
  4. Punishment, humiliation, & wakening the child repeatedly to void should be strongly discouraged.
- Conditioning devices (alarms), bed and ring reserved for persistent and refractory cases.
- Desmopressin as nasal spray is relatively safe and have a role in the management but has a high relapse rate on discontinuation.
- Tricyclic antidepressants (e.g. Imipramine) may also be successful in reducing enuretic episodes but relapse rate is high in addition to potentially serious side effects and marked toxicity.
- Oxybutenin: anticholinergic drug used for irritable bladder.

Encopresis (soiling)

Definition
- It’s voluntary or involuntary passing of stool into the underwear, for at least once in a month for 3 consecutive months, in a child > 4 years old. Almost all have history of constipation.

Classification
1. Primary: when there's no gaining bowel control before, usually they have neurological or developmental delay.
2. Secondary: when there was gaining of bowl control before but loss of it later on.
- According to the bowl content:
  a. **Retentive**: when there's fecal impaction with overflow of stool. It’s about 65-95% of cases.
  b. **Non-retentive**: when there's no fecal mass blocking the bowl.
C.F

- Underwear soiling, may be misdiagnosed as diarrhea.
- Dischezia: painful defecation.
- Recurrent abdominal pain.
- Impairment of appetite with poor wt. gain.
- Commonly associated with enuresis.
- Large bowel motion (stool) wt obstruct the toilet.
- Recurrent U.T.I.
- Us. There is psychological problem for non-retentive type.
- Poor school performance (due to having offensive odor).

Epidemiology

- 4% of children at 5-6 years old have this problem.
- 1.5% of them they have it at the age of 11-12 years old.
- 4-5 times more common in males.

Etiology

- It has biologic, emotional & learning base.
- There's hereditary & developmental factor.
- Usually there is conflict in the family.
- Low self-esteem.
- Holding of stool (not going to toilet.)
- Bad history of toilet training.

Diagnosis

- Exclude fecal incontinence due to N. & N-M cause.
- P.R.to detect fecal impaction.
- Plain abdominal X-ray, detect fecal mass.

Treatment

- Remove impacted stool, bimanually or by drugs.
- Regular postprandial toilet training.
- Balanced diet to prevent constipation, including high fiber diet.
- Behavioral therapy.
- Rapid rectal disimpaction: glycerin supp/phosphate enema.
- Slow oral disimpaction:
  - Over 2-3 d. (polyethylene glycol electrolyte).
  - Over 5-7 d. (polyethylene glycol without electrolyte then followed by milk of magnesia, mineral oil, lactulose, sorbitol).
- Maintenance:
  - Long term (years): milk of magnesia, mineral oil, lactulose, sorbitol, polyethylene glycol 3360.
  - Short term (months): sienna orally, glycerin enema, bisacodyle supp.