

# Enuresis

## BACKGROUND

- Enuresis is involuntary voiding of urine at night, in the absence of underlying disease, in children over 5 years
- Enuresis is common, affecting 15-20% of 5 year and 5% of 10-year-olds
- Can have significant impact on quality of life and self-esteem
- Treatment depends on type of enuresis:
  - Monosymptomatic** = only night time symptoms
  - Non-monosymptomatic** = night and daytime symptoms

## ASSOCIATED FACTORS

- History of enuresis in first degree relative
- Male gender
- Constipation
- Sleep-disordered breathing
- Obesity
- Developmental or psychological disorders

## PATHOPHYSIOLOGY

- Usually idiopathic
- Genetic tendency
- Contributing mechanisms include "The Three Systems":
  - Defective sleep arousal
  - Nocturnal polyuria
  - Bladder dysfunction

## PROGNOSIS

- Decreases with age
- Spontaneous resolution of approximately 15% per year
- More severe cases and non-monosymptomatic enuresis are more likely to persist

## HISTORY

- Pattern of enuresis
  - Frequency
  - Time of night
  - Triggers
  - Primary or secondary enuresis
- Daytime symptoms (LUTS): frequency, urgency, polyuria, dysuria
- Fluid intake
- Sleep pattern
- Constipation
- Family history

## EXAMINATION

- Height, weight
- BP
- Abdominal palpation
- Examine spine
- Lower limb neuro examination
- Examine genitalia

## INVESTIGATIONS

- Bladder Bowel Diary
- Urinalysis ± MC&S if red flags

## Mono Symptomatic

### ENURESIS ALARMS

- Children > 7 years
- High long-term success rate
- Commitment of child and family required
- Assess response at 4 weeks

### DESMOPRESSIN

- Children > 7 years
- For short-term treatment, or if alarm not suitable
- 120 – 240mcg SL

## RED FLAGS

- Acute onset
- Persistent secondary enuresis
- Daytime symptoms
- Polydipsia
- Family history of renal disease
- Weight loss
- Hypertension
- Abnormal neurology/spine
- Distended bladder
- Glycosuria/ early morning proteinuria

### DAYTIME SYMPTOMS

- Frequency, urgency, dysuria, straining, poor stream, daytime wetting
- If present, consider using anticholinergics and urotherapy

## RECOMMENDED DAILY FLUID INTAKE

- 4-8 years
  - 1000-1400mL
- 9-13 years
  - 1200-2100mL (girls)
  - 1400-2300mL (boys)
- 14-18 years
  - 1400-2500mL (girls)
  - 2100-3200mL (boys)

## TREATMENT

- Demystification
- Treat constipation
- Adequate fluid intake and toileting (void before sleep)
- Avoid caffeine and tartrazine containing fluids close to bedtime
- Rewards for engagement, rather than dry nights

## REFERRAL

- Any RED FLAGS**
- Daytime Symptoms (LUTS)
- Failure to respond to treatment
- Recurrent UTIs
- Co-morbidities

## REFERENCES:

- Kiddoo,D. 2015. Nocturnal enuresis: non-pharmacological treatments. BMJ clinical evidence
- O'Flynn,N. 2011. Nocturnal enuresis in children and young people: NICE clinical guideline. British Journal of General Practice, 61(586), pp.360-362.
- Caldwell,P.H., Deshpande,A.V.and Von Gontard,A., 2013. Management of nocturnal enuresis. Bmj, 347.
- Weintraub,Y, Singer,S, Alexander,D, Hacham,S, Menuchin,G, Lubetzky,R, Steinberg,D.M.

- and Pinhas-Hamiel,O. 2013. Enuresis-an unattended comorbidity of childhood obesity. International Journal of Obesity, 37(1), pp.75-78.
- Royal Children's Hospital Melbourne Enuresis. 2019 - Bed wetting and Monosymptomatic Enuresis Clinical Practice Guideline.
- HSE. 2016. Clinical Guidelines on the Management of Monosymptomatic Enuresis in Ireland. Enuresis Subgroup of the National Steering Group for the Revised Child Health Programme.