Croup

Inflammation of the larynx and trachea subglottic airway; children present with upper respiratory tract infection symptoms and classic barky cough.

Incidence, prevalence
- Most common form of airway obstruction in children aged 6 months to 6 years
- Symptoms worsen in nighttime hours
- Incidence in boys is about 1.4 times that in girls
- Is most common during September-December in North America
  - Minor peaks in February
  - Major peaks every other October (odd-numbered years)

General recommendations for acute treatment
- Outpatient management with corticosteroids
  - Reduces length of stay in emergency departments by 12 hours
  - Reduces number of hospital admissions by 50%
  - Reduces rate of return visits to emergency departments by 50%
  - In severe cases, reduces rate of intubation 5-fold
  - Oral dexamethasone is better tolerated than oral prednisolone
  - Dexamethasone is better at reducing rate of return than prednisolone
  - Effectiveness of PO and IM dexamethasone are equivalent
  - Combining PO dexamethasone with nebulized budesonide showed no added benefit
  - Caution use of steroids in patients who have been exposed to varicella virus
- Addition of nebulized epinephrine in more severe cases
  - Effects last 1 hour and are gone by 2 hours; therefore, should observe patient at least 3 hours after administration for possible rebound symptoms

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Pernicious anemia (B12 deficiency)

Anemia due to lack of intrinsic factor in gastric secretions, which leads to impaired vitamin B12 absorption.

Pathophysiology
- Incidence/prevalence
  - 10–20 cases per 100,000 people per year
  - Incidence of subclinical pernicious anemia appears higher: 1.9% of survey population had unrecognized and untreated pernicious anemia
  - Vitamin B12 deficiency affects about 5% of people aged 65–74 years and >10% of people aged ≥75 years
  - Male to female ratio is 1:1
  - Onset usually in individuals aged 40–70 years
  - Congenital form usually manifests in individuals aged <2 years
- Risk factors
  - HLA-A2, A3, B7
  - Type A blood
  - European descent
  - Associated with
    - Thyroid disorders, type 1 diabetes mellitus, ulcerative colitis
    - Addison’s disease, infertility, acquired agammaglobulinemia
- Morbidity/mortality
  - Patients on appropriate therapy have normal lifespan
  - Untreated disease can lead to permanent neurological dysfunction and congestive heart failure (CHF) due to severe anemia
  - Incidence of gastric adenocarcinoma 2 to 3 times greater than general population

Acute therapy
- Transfusions rarely required for individuals with pernicious anemia unless patients have severe CHF and/or coronary artery disease
- Cobalamin: 100 mcg/d IM
- Folic acid can make neurological symptoms worse

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