Constipation

- Prevention
  - Poly-pharmacy
  - Widespread opioid use
- Assessment
  - History
    - Pre-diagnosis stooling pattern
    - Very common pediatric diagnosis
    - Questionnaires useful in patients who don't feel comfortable verbalizing bowel habits, "constipation" means different things to different people
    - These scales a great for older children and teens especially
      - Victoria Hospice Society Bowel Performance Scale[1]
      - Modified Bristol Stool Form Scale[2]
        - Lower age limit is 6 years old if descriptors are read to patient
        - Bristol Stool Form Scale available as an app
  - Physical
    - Abdomen
    - Visualize ano-rectal area at a minimum
    - Digital rectal exam if clinically appropriate (caution in setting of neutropenia/thrombocytopenia)
    - Neurologic exam
  - Imaging
    - Plain film can be very helpful
- Non-Pharmacologic Management[3,4]
  - Postprandial stooling, best after breakfast
  - Footrest and arm rest as needed
  - Fluids with soups, fruits, gelatin, yogurt and sauces
  - Use fiber cautiously, must be consuming adequate volumes of water to use supplements (1.5L/day)
  - Privacy (visual, olfactory, auditory)
- Pharmacologic management[3,4]
  - Mush (osmotics)
    - Polyethylene glycol and lactulose
    - Consider patient preference re: volume and sweetness
    - Grade A/Level I evidence
    - Docusate, which is commonly used, has no clear evidence[5]
  - Push (stimulants)
    - Senna and Bisacodyl
    - Lack of clear evidence for this category of agents
    - FYI Senna is available as a tea
- Differential Diagnosis
  - Medications
    - Not just opioids
    - Anticholinergics, anticonvulsives, antihypertensives, antiemtics, antacids, and oral chemotherapy
  - Disease progression
    - Neurologic
    - Physical obstruction

- Ongoing Management
    - Continue maintenance with osmotics and stimulants
    - Opoid induced constipation[3,4,6,7,8]
        - Methylnaltrexone
            - Peripherally restricted mu receptor antagonist, with limited permeability at the blood brain barrier
            - Sub-Q
            - "Proof of concept" demonstrated in randomized controlled trials
        - Alvimopan
            - Peripherally acting antagonist
            - Indicated for post operative ileus
            - Can be used in this setting but methylnaltrexone more widely discussed
        - Low dose oral/ultra low dose IV naloxone
            - Does cross the blood brain barrier
            - Less evidence in setting of constipation
            - Can be helpful in managing other side effects like pruritis
    - Enemas and Suppositories as indicated
    - Limit intervention in actively dying patient
        - Treat associated pain
    - Consider side effects of interventions
        - Diarrhea
        - Abdominal pain
        - Nausea
        - Bloating
        - Cramping

Sleep[3]

- Sleep is key!
    - Interdependence between other symptoms
        - Fatigue
        - Pain
        - Mood
    - Respite from disease and symptoms for patient and caregiver
- Assessment
    - History
        - Previous routine
        - Current sleeping patterns
        - Location
    - Sleep diary
    - BEARS[9]
        - 5 item pediatric sleep screening instrument
    - Review medications
        - Frequent offenders
            - Steroids
            - Diuretics

        - IVF
    - Polysomnography[10]
        - If appropriate with goals of care and non-invasive ventilation a potential option
- Management
    - Basic Sleep Hygiene
        - Develop and stick to bedtime routine
        - Quiet time before bed
        - Cool room
        - Manage positioning
        - Lighting to reflect day/night cycle
        - Out of bed during day as tolerated
        - Co-sleeping as appropriate
    - Optimize hospital setting
        - Medication schedules
        - Silence alarms
        - Time lab draws appropriately
        - Continue bedtime routine and good sleep hygiene
    - Psychological support
        - CBT
        - SW/Psychology
    - Respiratory support/oxygen
        - If appropriate with goals of care
    - Pharmacologic interventions
        - Lack significant evidence base
        - No FDA approved medicine indicated for sleep
        - Potential options:
            - Melatonin
            - Antihistamines
            - Benzodiazepines
            - Non-benzo hypnotics
            - Clonidine
            - Chloral hydrate
                - Liquid formulation no longer manufactured

Anxiety[3,11]

- Assessment and Considerations
    - Symptom vs. actual disorder
        - Anhedonia may be more specific for an anxiety *disorder*
    - Communication with patient
        - Encourage open, honest, and developmentally appropriate discussions
        - Withholding information may increase patients anxiety
    - Parental anxiety will contribute to patient anxiety
- Management strategies require multidisciplinary team approach
    - Key interventions[12]
        - Share control
        - Limit separation of patient from caregiver
        - Encourage ADL's
        - Distraction
        - Relaxation

        - Treat pain and other symptoms
        - Psychological referral
        - Pharmacologic therapy as indicated
            - Benzodiazepine
            - SSRI
    - Procedural anxiety
        - Prevent anxiety with adequate sedation and analgesia
        - Use procedure rooms when possible
    - Potential therapy modalities
        - CBT
        - Bibliotherapy
        - Art therapy
        - Writing
        - Music therapy

Fatigue[3,13,14]

- Background
    - Prevalent and distressing[15,16]
    - Most common side effect of chemotherapy and radiation
    - Complex and multifactorial (Ulrich 200)
        - Sleep disturbance
            - Fatigue usually not responsive to rest
        - Psychosocial factors
        - Physical factors
- Assessment
    - Ask your patients, frequently underreported
    - Review medications
    - Presentation will vary by age
        - Younger children will have more physical symptoms
        - Older children more likely to describe the impact on lifestyle (emotional and cognitive symptoms)
    - Popular instruments
        - MSAS
        - PedsQL
- Management
    - Correct underlying factors
        - Anemia
        - Consider goals of care
    - Revisit sleep hygiene
    - Limit naps if developmentally appropriate
    - Lifestyle modification
        - Maintain a set daily routine
        - Exercise as tolerated
        - Optimize nutritional status
    - Pharmacotherapy
        - Methylphenidate
        - Modafinil

        - Megesterol acetate
        - L-carnitine
- Additional Pearls
    - Educate families that fatigue is not just something to accept but something that is potentially treatable with the awareness that
    - Try distraction
    - Assistive devices (i.e. wheelchair)
    - Encourage appropriate complimentary and alternative medicine
    - Be aware that fatigue may increase more near end of life
        - Balance comfort and sedation vs wakefulness

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