Non-motor symptoms of PD: gastrointestinal (GI) issues

Living Well at Home Series
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20 years ago...

Slowness
Tremor
Stiffness
Balance changes
Falls
Dyskinesias
“Off” time
Today

- Slowness
- Tremor
- Stiffness
- Balance changes
- Falls
- Dyskinesias
  - “Off” time

- Sleep
- Neuropsychiatric issues
- Constipation
- Smell loss
- Fatigue
- Drooling
Constipation (and other GI issues) in PD
Drooling
(sialorrhea)
Drooling (sialorrhea)

- Can be an early symptom, but most often happens later in the disease
- Due to
  - Reduced swallowing frequency
  - Hypomimia with mouth opening
  - Abnormal head posture
  - There actually seems to be decreased salivary production in PD
- Excessive drooling can lead to
  - Social embarrassment and isolation
  - Choking of abundant oral secretions, which may lead to pneumonia
  - Difficulty speaking
  - Irritation of the labial commissures
    - Angular cheilitis
Treatment of sialorrhea

- Chewing gum
- Botulinum toxin
  - Injections to the parotids and/or submandibular glands
  - Toxin may spread to the eyes and cause eye dryness, or to the masseters and impair chewing
  - Xeomin® is the only FDA-approved toxin for sialorrhea
- Atropine ophthalmic drops 1%
  - 1 sublingual drop every 12 hours
  - Higher doses can cause systemic anticholinergic effects
- Scopolamine patches
- Dopaminergics
- Radiotherapy
Trouble swallowing
(dysphagia)
Trouble swallowing (dysphagia)

- Dysphagia tends to emerge later in the course of the illness
- Swallow dysfunction can occur at 3 sites:
  - Mouth – patients may have difficulty chewing, or pushing the food to the back of the throat
  - Pharynx – difficulty transitioning food down the esophagus as opposed to the airway
  - Esophagus – difficulty for food and pills to go down into the stomach
- Symptoms include
  - Coughing
  - Choking
  - Sensation of food being “stuck on throat”
- Consequences of dysphagia include
  - Airway obstruction
  - Pneumonia
  - Belching
  - Weight loss (multifactorial, reduced smell/taste likely also contributes)
Assessment and treatment of dysphagia

- Modified barium swallow
- Swallow therapy
- Chin-tuck maneuver
- Diet modification
  - Meal frequency
  - Food consistency
- Liquid thickeners
- Gastrostomy tubes
  - Of note, feeding tubes DO NOT prevent aspiration
- Dopaminergic medication
- High-fat ice cream is easy to swallow and can help keep on weight.
Nausea and impaired gastric emptying (gastroparesis)
Nausea and gastroparesis

- Nausea is a very common side effect of PD medication
- Nausea can be a symptom of gastroparesis, and can be present in >70% of patients

Symptoms
- Vomiting
- Early satiety

Levodopa may favor gastroparesis (?)

Consequences of gastroparesis
- Weight loss
- Motor fluctuations

Treatment
- Domperidone (may cause arrhythmias)
- Ginger and taking medications with meals can prevent nausea
- AVOID REGLAN (metoclopramide)!!!
- Plain carbidopa (Lodosyn®) can help with nausea prevention
- Some medications circumvent the gut: Neupro®, Inbrija®, Kynmobi®, Apokyn®
Constipation
Constipation

- Can be seen in early stages of PD (or predate the motor symptoms)
- Constipation can be a risk factor for PD
  - Honolulu aging study: Men with <1 BM per day at 2–5-fold increased risk of developing PD in the future
  - Gao et al: <3 BM/week a/w 5-fold increased risk of PD in men, 2.2-fold increase in women
- 60-70% of patients with PD have synuclein pathology on colon biopsy
- Causes
  - Increased colon transit time
  - Pelvic floor dyssynergia
  - Medication side effect
  - Dehydration
Treatment of constipation

- Exercise
- Hydration
- Fiber
  - Fruits (prunes)
  - Vegetables
  - Psyllium (Metamucil®)
- Stool softeners
  - Docusate (Colace®)
- Prokinetics
  - Senokot (Senna®)
- Osmotic laxatives
  - Polyethylene glycol (MiraLax®)
- Prescription medications
  - Linaclotide (Linzess®)
  - Lubiprostone (Amitiza®)
Conclusions

- The GI system is heavily involved in PD, from the mouth to the anus.
- Medication side effects can worsen GI symptoms.
- It is important to treat sialorrhea, not only for cosmetic reasons.
- Weight loss should be combatted aggressively.
- Gastroparesis can interfere with the efficacy of PD treatment.
- Constipation can be very uncomfortable and cause deterioration of overall symptoms.
- Hydration, fiber and exercise is the way to go!!!
Questions?
Thank you!