Gastrointestinal (GI) symptoms

- Drooling
- Difficulty swallowing
- Bloating
- Feeling full too soon
- Nausea
- Constipation
- Difficulty with defecation
- Weight loss
Significance

- Negatively impact quality of life
- Associated with life-threatening complications
- Often lead to emergency admissions
- Affect motor symptoms by interfering with medication absorption

Weight loss

- Very common
- Women may be more vulnerable
- Possible contributing factors:
  - impaired smell & taste
  - trouble swallowing
  - increased energy expenditure from excessive movements (tremor)
  - side effects (nausea & anorexia) from medications
  - loss of muscle mass from immobility
- If dramatic or ongoing, consultation with primary care physician and registered dietician are needed
Drooling

• Excessive saliva in the mouth ± overt drooling occurs in a majority of patients
• Can lead to aspiration pneumonia
• Saliva production is not increased
• Drooling is the result of infrequent & inefficient swallowing

Management of drooling

• Chewing gum or hard candy in social situations
• Medications to reduce saliva production
  • Topical ipratropium bromide or atropine drops
  • Oral glycopyrrolate
• Botulinum toxin injections
Difficulty swallowing

• Very common
• Associated with aspiration pneumonia
• Should be evaluated by a speech therapist & specialized radiology tests
• Optimizing motor medications can help
• Swallowing training by a speech therapist can help
• Feeding tube placement is an option.

Nausea

• Common side effect of medications
• Also occurs in untreated patients due to slow stomach emptying
• Slow stomach emptying also causes bloating, abdominal pain, feeling full too soon, and weight loss
Management of Nausea

- May require medication adjustment
- Patients may benefit from a gastroparesis diet
  - Small, frequent meals
  - Avoid foods high in fat & fiber
  - Take fluids throughout meals
  - Remain upright & walking for 1-2 hours after meals
- Avoid metoclopramide
- Consider domperidone or erythromycin
- Consider trimethobenzamide

Constipation

- Extremely common
- Treatment should begin with a conservative approach
  - Increase fluid intake
  - Increase dietary fiber
  - Increase daily activity levels
  - Stop medications known to contribute to constipation
Managing constipation

- Start with Psyllium (Metamucil®) ± a stool softener like docusate sodium (Colace®)
- If ineffective, add Polyethylene glycol (Miralax®)
- Consider prescription laxatives
- Avoid excessive use of stimulant laxatives

Defecatory dysfunction

- Excessive straining, pain, or a feeling of incomplete evacuation during defecation
- Use of routine laxatives & stool softeners do not help and may actually make the problem worse.
- Treatment with apomorphine or botulinum toxin injections may be useful.
- Biofeedback may be useful.
Effect of motor medications on GI symptoms

- Nausea & vomiting are common side effects of many motor medications.
- Levodopa & other motor medications further slow upper GI motility.
- Conversely, levodopa & other motor medications may improve drooling, swallowing problems, and defecatory problems.

Thank you!

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