Gastrointestinal Disorders

PTA 103 Intro to Clinical Practice 2

Objectives

1. Recall the anatomy and physiology of the upper GI, lower GI, and GI gland organs
2. Recall anatomic regions of the abdomen
3. Describe common classifications of GI disorders
4. Describe signs, symptoms and risk factors for common GI disorders

Objectives

1. Describe treatments for common GI conditions
2. Describe common patient support equipment for patients with GI dysfunction
3. Describe obesity (cause, risk factors, classification using BMI, weight management, medical management, and surgical interventions)
4. Discuss the impact of the cost of treatment associated with obesity
Objectives

- Reflect on how prejudice and attitude may impact effectiveness of physical therapy
- Select tests and measures for activity progression based on the PT plan of care for a given case simulation
- Communicate with the PT based on analysis of data collected for a given case simulation
- Describe the role of the PTA in health and wellness management for a given case simulation
Common Classifications of GI Disorders

- Infectious (bacterial, viral)
- Autoimmune/Immunosuppressive
- Genetic predisposition
- Lifestyle (smoking, EtOH, diet, stress)
- Medication use (aspirin, NSAID, antibiotics)
- Cancer
- Trauma
- Abdominal surgery (current or history of)

Common Signs and Symptoms of GI disorders

- Nausea
- Vomiting
- Anorexia
- Diarrhea
- Constipation
- Fluid and electrolyte imbalances
- Pain (abdominal and referred)
- Malnutrition

Common Treatments For GI Disorders

- Dietary Modifications
  - Alcohol
  - Caffeine
- Stress Reduction
- Drugs
  - Anti-emetic
  - Anti-diarrheal
  - Antacid
  - Laxative
  - Acid reducers
- Surgical Intervention
  - Hernia repair
  - Gastric bypass
  - Bowel resection
  - Gland removal
## Summary of GI Dysfunction

<table>
<thead>
<tr>
<th>Anatomy</th>
<th>Pathology</th>
<th>Associated Terms</th>
<th>Risk Factors</th>
<th>Signs and Sxs</th>
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</thead>
<tbody>
<tr>
<td>Upper GI</td>
<td>Candidiasis</td>
<td>Thrush</td>
<td>Antibiotic use</td>
<td>Red, swollen mouth with white patches that can be scraped off, weight loss due to pain in mouth with eating</td>
</tr>
<tr>
<td></td>
<td>Yeast infection the oral cavity</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Upper GI</td>
<td>Herpes Simplex 1 Viral infection</td>
<td>Cold Sore/Fever blister</td>
<td>Contact by mouth with carrier/host</td>
<td>Burning blister in or around mouth</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Upper GI</td>
<td>Dysphagia</td>
<td></td>
<td></td>
<td>Difficulty with safe and effective chewing and swallowing, coughing with eating and/or drinking</td>
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### Upper GI GERD
- Acid Reflux
- Endoscopy
- Barium Swallow
- NSAID use
- EtOH use
- Infection
- Smoking
- Excessive acid production

- Heartburn
- NERD
- Esophagitis
- Dysphagia
- Same as GERD, with increased severity

### Upper GI Barrett’s Esophagus
- Change in epithelial cell morphology
- Chronic GERD
- Diffuse Barrett’s

- Same as GERD, with increased severity, weight loss, pain

### Upper GI Esophageal Cancer
- Squamous carcinoma
- Achalasia
- Strictures

- Same as GERD, with increased severity, weight loss, pain

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## Achalasia

- A
- Ka
- Lay
- ja
### Summary of GI Dysfunction

#### Stomach
- **Pathology:** Gastritis, inflammation of inner stomach lining, hyperacidity, can lead to electrolyte imbalance
- **Associated Terms:** Dyspepsia
- **Risk Factors:** Trauma, campylobacter infection, H. pylori, aspirin, ETOH, renal failure, liver failure, mechanical ventilation, medications
- **Signs and Sxs:** Hemorrhage, fever, epigastric pain, nausea, anemia, hematemesis

#### Stomach
- **Pathology:** Peptic ulcer, ulceration of the gastric, duodenal mucosa
- **Associated Terms:** Bleeding, Perforation, Obstruction
- **Risk Factors:** ETOH use, stress, NSAIDs, bacterial infection
- **Signs and Sxs:** Burning, growing pain, reduction of pain with vomiting, nausea, and/or vomiting, bleeding

#### Lower GI
- **Pathology:** Irritable Bowel Syndrome (IBS) Colon dysfunction
- **Associated Terms:** BRAT diet (banana, rice, apple, tea or toast), rice, apple, tea or toast
- **Risk Factors:** Deficiencies, Nutritional obstructions, Small bowel obstruction
- **Signs and Sxs:** Weight loss, bleeding, Occ. Rectal bleeding, Alternating loose stool and constipation

#### Lower GI
- **Pathology:** Crohn’s Disease, Inflammation of intestinal wall
- **Associated Terms:** Bloating, cramps
- **Risk Factors:** Unknown, Possible autoimmune response, bacterial or viral infection
- **Signs and Sxs:** Abdominal pain, diarrhea, Occ. Rectal bleeding, Weight loss, Small bowel obstruction, Fats malabsorption, Nutritional deficiencies

#### Lower GI
- **Pathology:** Ulcerative Colitis, Inflammation of rectum and colon
- **Associated Terms:** Inflammatory bowel disease
- **Risk Factors:** Unknown, Possible autoimmune response, bacterial or viral infection
- **Signs and Sxs:** Alternating loose stools and constipation, Bleeding with diarrhea, Occ. Rectal bleeding, Weight loss, Small bowel obstruction, Fats malabsorption, Nutritional deficiencies
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<tr>
<td>Intestinal</td>
<td>Whipple’s Disease</td>
<td>Malabsorption</td>
<td>Intestinal bleeding, Fatigue and weakness, Malabsorption, Weight loss, Depression</td>
<td></td>
</tr>
<tr>
<td>Intestinal</td>
<td>Short Bowel Syndrome</td>
<td>Total parenteral nutrition (TPN)</td>
<td>Malabsorption, Exposure to Toxoplasma Whipplei</td>
<td>Abdominal pain, Weight loss, Incomplete breakdown of intestinal materials, Diarrhea, Intestinal bleeding, Fatigue and weakness, Malabsorption</td>
</tr>
<tr>
<td>Intestinal &amp; Abdomen</td>
<td>Hernias</td>
<td>Obesity, Constipation, General debility</td>
<td>Hernia, Herniorrhaphy, or hernioplasty, Intestinal obstruction, Hernia &amp; abdominal deformity</td>
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<td>Vascular</td>
<td>Hemorrhoids</td>
<td>Rectal bleeding</td>
<td>Anemia, Anorexia, Nutritional deficiencies, Prolapse, Hemorrhoids</td>
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<td>Intestinal</td>
<td>Diverticulitis</td>
<td>Intestinal resection</td>
<td>Chronic constipation, Inflammatory bowel disease</td>
<td>Constipation, Diarrhea, Rectal bleeding</td>
</tr>
<tr>
<td>Intestinal</td>
<td>Ileostomy</td>
<td>Total parenteral nutrition (TPN)</td>
<td>Abdominal pain, Surgical site infection</td>
<td>Malabsorption, Weight loss, Fever and chills, Abdominal pain</td>
</tr>
<tr>
<td>Intestinal &amp; Abdomen</td>
<td>Ostomies</td>
<td>Placement of drains</td>
<td>Fistula formation, Constipation, Prolapse, Hernia</td>
<td>Fistula formation, Constipation, Prolapse, Hernia</td>
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<td>Vascular</td>
<td>Varicose veins</td>
<td>Rectal bleeding</td>
<td>Hemorrhoids, Hemorrhoids</td>
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<td>Malnutrition</td>
<td>Chronic constipation, Hemorrhoids</td>
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<td>Vascular</td>
<td>Hemorrhoids</td>
<td>Anemia</td>
<td>Hemorrhoids, Nutritional deficiencies, Prolapse</td>
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<tr>
<td>Arterial</td>
<td>Aneurysm</td>
<td>Hypertension</td>
<td>Stroke, Heart attack</td>
<td>Hypertension, Stroke, Heart attack, Hypertension</td>
</tr>
<tr>
<td>Venous</td>
<td>Venous insufficiency</td>
<td>Obesity, Smoking</td>
<td>Pulmonary embolism, Deep vein thrombosis</td>
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</tr>
<tr>
<td>Neoplastic</td>
<td>Cancer</td>
<td>Smoking</td>
<td>Lung cancer, Gastric cancer</td>
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<td>Liver</td>
<td>Jaundice</td>
<td>Excessive bile production</td>
<td>Cirrhosis, hemolysis, anemia</td>
<td>Yellowing of skin, eyes, and fingernails</td>
</tr>
<tr>
<td>Liver</td>
<td>Cirrhosis</td>
<td>Fatty liver (alcohol)</td>
<td>Hepatitis B, C, D, viral infection, autoimmune hepatitis</td>
<td>Effects multiple body systems</td>
</tr>
<tr>
<td>Liver</td>
<td>Hepatitis</td>
<td>Inflammatory process in the liver</td>
<td>Blood borne pathogen</td>
<td>Effects multiple body systems</td>
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Gallbladder

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<td>Gallbladder</td>
<td>Cholelithiasis</td>
<td>Gallstones</td>
<td>Diabetes, Obesity, Alcoholity</td>
<td>Severe epigastric or RUQ pain, referred pain under the right scapula, radiating pain to back, abdominal swelling, nausea and/or vomiting</td>
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Pancreas

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<td>Pancreas</td>
<td>Pancreatitis</td>
<td>Inflammation of pancreas</td>
<td>EtOH, Calcium malabsorption, infection, abdominal trauma</td>
<td>Abdominal/epigastric pain (worse with eating, walking, supine), radiating pain to back, abdominal swelling, nausea or vomiting, fever, dehydration, hypoglycemia</td>
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Obesity

- Second most preventable cause of death (smoking is first)
- Classified by Body Mass Index of >=30 body weight as fat
- Increased risk of developing physiological impairments and disease
  - Type II diabetes
  - HTN
  - CAD
  - CVA
  - OA
  - Asthma
  - Obstructive sleep apnea
Obesity

Psychosocial impacts
- Poor functional status results in restricted activity
- Pain
- Negative health perception
- Depression
- Cost of health care increases due to preventative, diagnostic and treatment services
- Higher incidence of disability
- Discrimination and abuse reported
- Evidence shows health care providers associate obese patient with poor hygiene, laziness
- General lack of equipment/supplies to accommodate larger patients (BP cuffs, gowns, exam tables, scales) decreases willingness to seek medical care

Weight Loss

- 5-10% reduction can produce measurable health benefits
- Decreased absenteeism from work reported from surgical and non-surgical weight loss programs
- Patients who are morbidly obese (BMI > 40 kg/m2, or 100 pounds over ideal weight) may qualify for bariatric surgery (gastric bypass) for weight control

Patient support equipment

- Intravenous fluids (IV)
- Total Parental Nutrition (TPN/JV delivery of food and nutrients)
- PEG, N-G tube
- Red blood cell infusions
- Jackson-Pratt drains (JP) – aids in removing fluid from abdominal wounds
- Sump drains – suction device to remove fluid from abdominal/surgical wounds
- Foley catheter
- Colostomy bag
Role of the PT

- Complete a systems review and an examination
  - Collect and document baseline subjective and objective data, tests, and measures
- Interpret examination findings
  - Prioritize primary and secondary impairments, functional limitations and disability
  - Document any contraindications to PT treatment
  - Develop a plan of care comprised of interventions to address reason for skilled PT
- Develop a plan of care
  - Set short and long-term, patient-specific, measurable goals and expected outcomes for PT treatment
  - Set a frequency and duration for treatment
  - Establish a discharge plan based on expected outcome

PT/PTA Relationship

- Maintain positive, open, timely, patient-centered communication
- Delegate and accept responsibilities for treatment based on the skill level of the PTA
- POC
  - PT: Modify and update POC based on progress reported or reassessment
  - PTA: Document patient status (progress/barriers) and request clarification or input as needed depending patient response and skill set

Role of the PTA

Tests and Measures

Aerobic Capacity and Endurance
- VS pre-post activity, Borg PLE, O2 sats, observation for s/sx of cardiopulmonary response

Anthropometric Characteristics
- Height, weight, BMI, edema measures

Arousal, attention, cognition
- A&O, memory and recall
Role of the PTA
Tests and Measures
Pain
– VAS, faces scale, location, referral patterns
Joint Integrity and Mobility
– Range of motion (PROM/AROM) extremities and trunk
Functional Activity Performance
– FIM, Oswestry Disability Index

Role of the PTA
Interventions for Impairments
Impairment of endurance/aerobic capacity
Treatment:
1. Log rolling/bracing with pillow
2. Transfer training
3. Endurance training (gait, exercise)

Role of the PTA
Interventions for Impairments
Impairment of ventilation/respiration
Treatment:
1. Breathing exercises
2. Incentive spirometry
3. Huffing/directed cough
4. Chest percussion and vibration
Role of the PTA
Interventions for Impairments
Impairment of integument integrity
Treatment:
1. Wound care for incisions
2. Skin/wound care for ostomies

Role of the PTA
Interventions for Functional Limitations
Decreased ADLs and Self-Care
Treatment:
1. Training in adaptive devices and equipment
2. Environmental assessment and modifications

Role of the PTA
Interventions for Disability
Prevention and Wellness
Education in
1. Lifestyle modification/decreasing risk of recurrence
2. Energy conservation (pacing and prioritizing)
3. Ostomy care
Considerations for Billing

• Document minutes spent providing direct patient care (can include set up and patient communication/family training if patient is present)

• Consider the impairment you are treating when selecting an appropriate billing code
  – Endurance (therex – 97110 or ther act – 97530)
  – Joint mobility (therex – 97110)
  – Functional mobility (ther act -97530)
  – Breathing exercises ( therex – 97110)
  – Energy conservation techniques ( ther act – 97530)
  – Chest PT (manual therapy – 97140)