Gastrointestinal Disorders

PTA 103 Intro to Clinical Practice 2

Objectives

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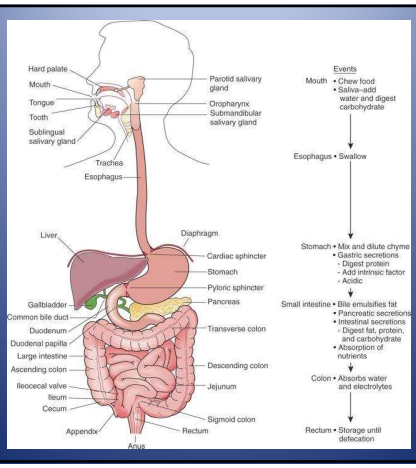
1. Recall the anatomy and physiology of the upper GI lower GI, and GI gland organs
2. Recall anatomic regions of the abdomen
3. Describe common classifications of GI disorders
4. Describe signs, symptoms and risk factors for common GI disorders

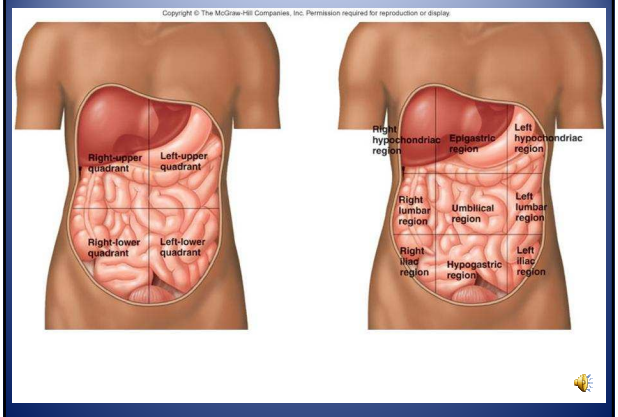
Objectives

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

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Upper GI	Candidiasis Yeast infection the oral cavity	Thrush	Antibiotic use Immuno-suppression	Red, swollen mouth with white patches that can be scraped off Weigh loss due to pain in mouth with eating
Upper GI	Herpes Simplex 1 Viral infection	Cold Sore Fever blister	Contact by mouth with carrier/host	Burning blister in or around mouth
Upper GI	Dysphagia	Aspiration	Neuromuscular impairment GI Disease	Difficulty with safe and effective, chew and swallow Coughing with eating and/or drinking

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Upper GI	GERD Reflux of gastric contents into stomach	Acid Reflux Barium Swallow Endoscopy	NSAID use EtOH use Infection Smoking Excessive acid production	Heartburn Regurgitation Esophagitis Dysphagia Pain (sub-sternal, non-cardiac) Sore or hoarse throat Hematemesis
Upper GI	Barrett's Esophagus Change in epithelial cell morphology	Chronic GERD	EtOH use Smoking May lead to esophageal cancer	Same as GERD with increased severity
Upper GI	Esophageal Cancer	Squamous carcinoma Achalasia Stricture	EtOH use Smoking Diet imbalances	Same as GERD, with increased severity, weight loss, pain

Achalasia

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Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Stomach	Gastritis Inflammation of inner stomach layer (mucosa) Can lead to electrolyte imbalance	Dyspepsia	Trauma Samonella infection NSAID Aspirin EtOH Renal failure Liver failure Mechanical ventilation >48 hrs	Hemorrhage Fever Epigastric Pain Nausea Anorexia Hematemesis
Stomach	Peptic Ulcer Disruption of the gastric or duodenal mucosa	Bleeding Perforation Obstruction	EtOH use Diet Stress NSAIDs Bacterial infection	Burning, gnawing pain Reduction of pain with eating Burping Nausea and/or vomiting Bleeding

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Lower GI	Irritable Bowel Syndrome (IBS) Colon dysfunction	BRAT diet (banana, rice, apple, tea or toast)	Stress Decreased sleep Dietary exacerbations (wheat, rye, barley, milk, EtOH, caffeine)	Alternating loose stools and constipation Bloating with abdominal pain Cramping Mucous/blood in stool
Lower GI	Crohn's Disease Inflammation of intestinal wall	Ileitis Enteritis	Unknown Possible autoimmune response to bacterial or viral infection	Abdominal pain Diarrhea Occ. Rectal bleeding Weight loss Small bowel obstruction Fistula formation Nutritional Deficiencies

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Lower GI	Ulcerative Colitis Inflammation of colon and /or rectum	Inflammatory bowel disease	Unknown Possible autoimmune response to bacterial or viral infection	Alternating loose stools and constipation Bloating with abdominal pain Cramping Mucous/blood in stool

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Intestinal	Whipple's Disease Bacterial malabsorption condition	Malnourishment	Exposure to Tropheryma Whippelli	Abdominal pain Weight loss Incomplete breakdown of intestinal materials Diarrhea Intestinal bleeding Fatigue and Weakness
Intestinal	Short Bowel Syndrome Disorder from surgery where >50% of small intestine is removed Malabsorption condition	Total parenteral nutrition (TPN)	Hx of abdominal surgery Crohn's IBS UC Trauma	Weakness Fatigue Depression Dehydration and malnourishment Weight loss Diarrhea Cramping and bloating Heart burn

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Intestinal	Diverticulosis Small outpouchings or herniations in intestinal wall	Diverticulitis Intestinal necrosis	Advanced age Low fiber diet	Abdominal pain Fever and chills Nausea and vomiting Cramping Constipation Fistula formation
Intestinal/ bowel & abdomen	Ostomies Surgical openings of from intestine or bowel to the outside	Ileostomy (removal of colon and rectum) Colostomy (removal of colon)	HX cancer, intestinal disease Trauma	External pouch for collection and elimination of waste

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Intestinal & abdominal	Hernia Abdominal protrusion through a weak are in the abdominal wall	Inguinal (groin) Abdominal Femoral Hiatal Herniorrhaphy or hernioplasty (reduction hernia and abdominal reinforcement)	Obesity Heavy lifting Straining during bowel movements Pregancy Impaired nutrition Placement of drains General debility	Groin pain Palpable lump in groin Bowel obstruction Relief with applying pressure Shortness of breath
Vascular	Hemorrhoids	Sitz bath	Age (>50 yrs) Straining during bowel movements Chronic constipation	Pain Discomfort in sitting Itching Bleeding (anal canal and/or rectum)

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Liver	Jaundice Excessive bile production		Cirrhosis Hemolytic anemia	Yellowing of skin, eyes and fingernails
Liver	Cirrhosis Fibrosis of liver tissue	Fatty liver (alcoholic)	EtOH Hepatitis B, C, D Drugs and infection Autoimmune hepatitis	Effects multiple body systems
Liver	Hepatitis Inflammatory Process in the liver; typically viral	Blood born pathogen	Viral infection EtOH	Effects multiple body systems

Summary of GI Dysfunction

Anatomy	Pathology	Associated Terms	Risk Factors	Signs and Sxs
Gallbladder	Cholelithiasis	Gallstones	Gender (Female) Diabetes Obesity Ethnicity	Severe epigastric or RUQ pain Referred pain under the right scapula Indigestion after eating fatty foods Nausea and/or vomiting
Pancreas	Pancreatitis Inflammation of pancreas		EtOH Calcium malabsorption Infection Abdominal trauma	Abdominal/epigastric pain (worse with eating, walking, supine) Radiating pain to back Abdominal swelling Nausea or vomiting Fever Dehydration Hypotension

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;IV 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, measureable 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)