Diabetic Ketoacidosis
-Treatment differences
- True Na: adjust upward 1.6 mEq/L for every 100 mg/dL increase in blood glucose
- Potential serious CNS effects; 2-5% mortality rate
- Correct dehydration (there’s more here)

Correction of Hypernatremia
-Rapid fall in serum concentration (Na)
-she did not talk about how this is corrected in kids

Water Intoxication
- Baby: gets it from diluting formula, giving baby water in a bottle
- Kids swimming in pools and drinking the water
- Hazing occurs with older adolescents (college fraternities and such)

Altered Fluid Requirements
- Children have increased needs for
  - Fever
  - Vomiting, diarrhea
  - DI
  - High output renal failure
  - TachyP
  - Burns (1st 24 hours)

Decreased needs for fluids in:
- CHF
- Meningitis/neuro injury
- Mechanical ventilation
- Post-operatively
- Oliguric renal failure

Venous Access Devices
- Peripheral: peripheral IV or SL
- Central Venous Access: PICC, tunneled catheters, implanted ports
- Can also be Intraosssous!

Kids are different than adults...obviously!
- Infants prone to hypoglycemia
- Newborn stomach capacity is only 10 to 20 ml….expands to 200ml by one month
- Fast emptying time
- Faster metabolic rate
- Regurgitation is common

Obstructive Disorders
- Hypertrophic Pyloric Stenosis
- Gastro Esophageal Reflux
- Intussusception
- Hirschsprung disease

Pyloric Stenosis
- Incidence and etiology: males > females
- Pathophysiology: pyloric sphinctor is too tight. Food goes into stomach, but does not empty readily.
- Clinical manifestations: baby cries, nonbilious projectile vomiting b/c no place for food to go
- Symptoms develop between the 2nd and 4th week of life
• Vomiting increases in frequency and becomes projectile
• Baby feels better after vomiting
• Diagnosis
  • History, ultrasound, barium swallow, nuclear scan
  • Palpated olive-shaped mass
• Treatment
  • Surgery: pyloromyotomy
  • After surgery give small feedings, see how it goes
• Nursing management
  • Assessment
  • Nursing diagnoses prior to surgery
    • Inadequate nutrition: less than
    • Dehydration

GERD
• Gastro-esophageal reflux
• Clinical manifestations
  • Weight loss
  • Apnea (ALTE)
  • Vomiting/Regurgitation
• Diagnosis
  • History
  • pH probe: another step….put a little something in the nose, and it measures the pH of the esophagus; mom has to keep a log
  • Barium swallow
• Treatment for GERD
  • Dietary modifications: can try to change the diet to lactose-free or various other adjustments; add rice cereal to give weight to food; switch formula around to see what works; if breastfeeding, mom may need to alter diet
  • Positioning: feed upright, back to sleep
  • Medications: multiple meds; kids gain weight really fast so you have to go up on the doses of meds.
• GERD Treatment
  • Reglan: increases stomach motility; gets the food out of the stomach
  • Tagamet/Zantac: stops the acid secretion?
  • Protonix: Stops acid from being produced (proton pump inhibitor)
• Surgery
  • Nissen Fundoplication; used for kids that are at very serious risk for aspiration; downside is that the child can no longer vomit effectively, so they will probably also have a GT.

Intussusception (usually occurs around 2 years old)
• Clinical manifestations
  • Colicky
  • Intermittent abdominal pain
  • Vomiting
  • Currant jelly stools (red jelly-like, mucus and blood mixed together)
• Diagnosis: parent’s history of child's symptoms, air enema or barium enema
• Treatment: air enema or barium enema
• Nursing management & family teaching
  • Carefully interview parents for symptoms, frequency, etc...

Hirschsprung’s Disease
• Clinical manifestations
  • Fail to pass meconium within 24-48 hours of birth
  • Nerve to large intestine hasn’t grown in properly, so not enough nerves to get stool out...so the colon gets bigger causing a “megacolon” (aganglionic megacolon)
• Refusal to feed
  • Constipation or foul, ribbon-like stools; complete obstruction
  • Abdominal distention
  • Bile-stained vomitus
• Diagnosis: biopsy of bowel tissue shows lack of ganglions
• Treatment: two-stage surgical procedure
  • Colostomy is the first step; the bowel can heal so the nerves can grow in; colostomy lasts about a year
  • Take-down to put the bowel back together.
• Nursing management and family teaching
  • Preoperative
  • Postoperative

**Issues with Physical development**
• Cleft lip and palate
• Esophageal atresia with tracheoesophageal fistula
• Imperforate anus
• Hernias - umbilical, inguinal, diaphragmatic

**Cleft Lip and Palate**
• Incidence and etiology
• Pathophysiology: maxillary and nasal tissue fail to fuse
  • Unilateral or bilateral

**Cleft Lip and Palate, cont’d**
• Diagnosis: she didn’t go over this
• Treatment: surgery
• Assessment: she didn’t go over this
• Nursing diagnoses: she didn’t go over this
• Preoperative
  • Altered nutrition: less than body requirements
  • Pot. altered parenting
  • Body image
  • Risk for aspiration
• Postoperative Care
  • Risk of injury and infection: keep suture line clean
  • Pain
  • Deficient knowledge
  • Alteration in Growth & Development

**Esophageal Atresia (esophagus doesn’t go into stomach) and Tracheoesophageal Fistula**
• Diagnosis
  • Baby will be drooling a lot
  • History of maternal polyhydramnios (can usually see this on sonogram)
  • Prenatal sonogram
• Radiographic studies
• Treatment = surgery
• Nursing management
  • Do not feed them
  • Prep for surgery

**Constipation**
• Functional constipation: no cause found
• Obstipation: extremely long intervals between poops
• Encoporesis: fecal soiling
Anorectal Malformations (there are pictures)
- Incidence and etiology
- Pathophysiology
- Clinical manifestations
- Usually obvious at birth
- Can be normal-appearing anus
- Can see thin translucent anal membrane
- Possible deep anal dimpling

Acute Gastroenteritis
- Incidence and etiology
  - Rotavirus –most common, spread by contact
  - Pathophysiology: damages endothelial lining of GI tract
    - Infection damages epithelial lining of intestine
- Clinical manifestations of Acute Gastroenteritis
  - Water-loss stools, N/V
  - Abdominal pain
  - Dehydration
- Diagnosis for Acute Gastroenteritis: I think a stool sample is needed
- Treatment
  - Nursing management
    - Monitor fluid status, electrolytes
    - No antiemetic or anti-diarrheal medications
    - ORT if mild to moderate dehydration
    - BRAT diet not recommended

Biliary Atresia
- Incidence & etiology
- Pathophysiology: biliary tree gets inflamed and then is obliterated
  - Hepatic ducts replaced with fibrous tissue
- Clinical manifestations
  - Light colored stools b/c there is no bile in them
  - Jaundice
- Diagnosis (she did not go over this)
- Treatment
  - Kasai procedure; done as soon as possible on infant, attach small intestine to liver
  - Liver transplant (most kids end up needing a transplant)
  - These kids used to not live past 10 years...but treatments are getting better.
- Nursing management (she did not go over this)

Hernias
- Incidence and etiology (she did not go over this)
- Pathophysiology (she did not go over this)
- Umbilical – through belly button
- Inguinal – through inguinal canal or scrotum
- Diaphragmatic – through diaphragm into thoracic cavity
  - hear bowel sounds in lung fields
  - respiratory distress
- Clinical manifestations
  - History of FTT, light colored stools, irritable
- Diagnosis (she did not go over this)
- Treatment (she did not go over this)
- Nursing management (she did not go over this)
Short Bowel Syndrome

- Incidence and etiology
  - Kids have damaged bowel d/t treatments (short-bowel resection for necrotizing enterocolitis or some other bowel-damaging disease)
  - Length is < 30% of normal length
- Child does not absorb food correctly, we see them for FTT
- Treatment for SBS
  - TPN (may be on TPN for the rest of your life if you have less than 40 cm of bowel)
  - Enteral feedings
- Nursing management
  - Nutrition
  - Prevent infection
  - Home nursing care

GI Acute Care Needs

- Orogastric (OG)
- Nasogastric (NG) Tube
  - For feeding and/or decompression

Gastrostomy tubes (she did not go over this)

- TPN/Lipids
- Use pump
- Wean on and off
- Glucose checks

