# Newborn GI

## Pyloric Stenosis

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| **Pathophys** | Hypertrophy of pylorus. RFs = bottle feeding, maternal smoking |
| **Presentation** | **Immediate post-prandial projectile vomiting,** "hungry vomiter," palpable olive-like mass**. Classically presents in 3-6w infants, but can worsen by 2-3 month**s (rare by 12w), 4:1 male:female |
| **Workup** | BMP **(hyperchloremic metabolic alkalosis**), CBC (should be nml), bili (unconjugated hyperbili), hemoccult stool (should be neg), **abdominal ultrasound** |
| **Treatment** | 1. Address dehydration and correct alkalosis<br>2. Surgical consult for pyloromyotomy (definitive treatment)<br>3. Post-op refeeding can start within hours |

## Malrotation/Volvulus

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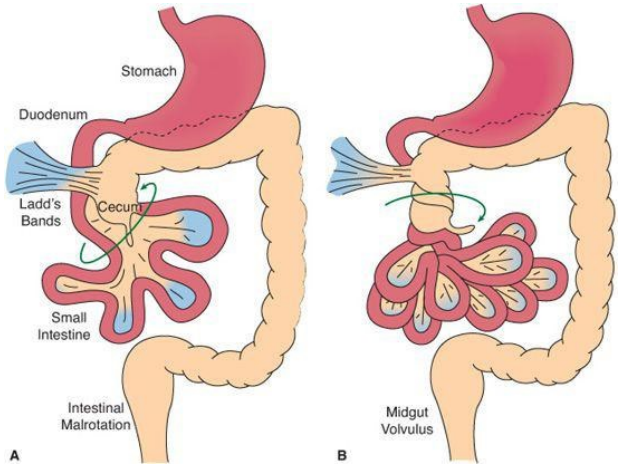
| **Pathophys** | • **Malro**: **arrest in normal rotation** in embryonic gut. Misplaced cecum is attached by peritoneal bands (Ladd bands) which cross the duodenum, leading to risk of volvulus. **Mostly asymptomatic**.<br>• **Volvulus**: Small bowel twisting around SMA → vascular compromise, ischemia, necrosis.<br>  <br> |
| **Presentation** | Bilious vomiting, third spacing, HD instability |
| **Workup** | • Bilious vomiting + signs of sepsis/hemodynamic compromise + suspicion of volvulus  rapid resuscitation and surgical exploration<br>• If HD stable → KUB, upper GI series (corkscrew appearance), U/S (whirlpool sign), CT in adults. Laproscopy if indeterminate. |
| **Treatment** | • **Ladd procedure**: division of Ladd bands, widening mesenteric base, explore duodenum with tube for patency, **appendectomy** (to avoid future confusion w/abd pain), **bowel resection as needed, placement of bowels in nonrotation**.<br>• Post-op, address **short gut syndrome** if relevant |

## Biliary Atresia

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| **Pathophys** | • Grouped into 3 categories<br>• The most common type (70-85%) is perinatal and involves a progressive **fibro-proliferative obliteration of the bile ducts** → destruction of the extrahepatic biliary tract → direct hyperbili, cirrhosis, liver failure. Etiology unknown.<br>• 2nd type of BA ("Biliary Atresia Splenic Malformation) is associated with laterality malformations - situs inversus, asplenia/ polysplenia, malrotation, interrupted IVC, cardiac anomalies.<br>• 3rd type is associated with other congenital anomalies- intestinal atresia, imperforate anus, kidney and cardiac anomalies. |

**Biliary Atresia continued on next page →**

| Newborn GI | |
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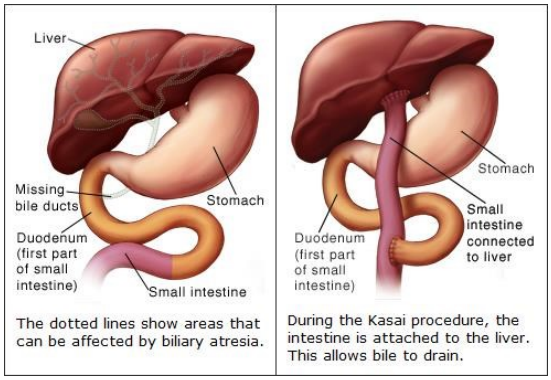
| **Biliary Atresia** | |
| **Presentation** | **Jaundice, acholic stools,** hepatomegaly |
| **Workup** | Bilirubin (**conjugated hyperbi**li), liver enzymes(tr**ansaminitis, elevated GGTP),** abd u/s **(inability to visualize gallbladder or small gallbladder**), HIDA scan (looks for excretion of bile from liver), liver biopsy, intraoperative cholangiogram |
| **Treatment** | • 100% mortality by age 2 if untreated.<br>• **Kasai procedure (hepatoportoenterostomy)** - (best if done before 2 months. Removal of portal tract remnant followed by Roux-en-Y anastomosis of jejunal loop directly to liver capsule to allow bile drainage.<br>• 60-70% of patients undergoing Kasai will **eventually need liver transplant**<br>  |