Peritoneal Cavity & Intestines

Tuesday, January 08, 2008
1:00 PM

Osteology:
- Lumbar vertebrae (N 240, 260)
- Pelvic inlet (N 308)
- Sacral promontory (N 150)
- Ala of sacrum (N 150)
- Iliopectineal line (N 468)
  - Arcuate line
  - Pectineal line
- Pubic body (N 468)
- Pubic symphysis (N 240)

Abdominal cavity
- Peritoneal cavity

Peritoneum:
- Parietal (N 335, 336, 337): serous lining of inner surfaces of walls of abdominopelvic cavity
- Visceral (N 335, 336, 337) - directly on top of the organs
- Mesenteries - peritoneal structures connecting organs of the peritoneal cavity
  - "The" Mesentery (of small intestine) (N 295, 335): connects jejunum, ileum to post. ab wall
  - Transverse mesocolon (N 276, 296): connects transverse colon to post. ab wall; forms floor of lesser peritoneal sac
  - Sigmoid mesocolon (N 276, 296): connects sigmoid colon to post ab wall; branches of inferior mesenteric artery; ascending preganglionic parasympathetic nerves form S2-4 to descending colon
  - Mesentery of appendix (mesoappendix) (N 273): connects appendix to mesentry of small intestine; contains blood supply to appendix, appendectomy
- Gastrocolic ligament (N 261): connects greater curvature of stomach w/ transverse colon; part of greater omentum
- Gastrosplenic ligament (N 261): connects greater curvature of stomach w/ hilum of spleen; part of greater omentum
- Splenorenal ligament (N 261): attaches spleen to post ab wall over left kidney
- Omental apron (N 261): part of greater omentum that hangs inferiorly from transverse colon
- Falciform ligament (N 261): connects liver to umbilicus; remnant of umbilical v.
- Anterior cecal fold (N 273): from mesentery to anterior surface of cecum w/ vasculature
- Ileoceleal fold (N 273): from ilium to cecum; inf to ilioceleal jxn
- Fusion fascia: mesentery of retroperitoneal organs

Viscera:
- Peritoneal vs. retroperitoneal (N 335, 336, 337): ascending/descending colon, kidneys
- Liver (N 261): two lobes, connected to umbilicus via falciform ligament
- Stomach (N 261): upper left quadrant; rotates during development so that lesser curvature is superior and right; greater curvature is inferior and left
- Small intestine (N 261): 21 ft long; duodenum (1 ft) is mostly retroperi
- Duodenjeunal flexure (N 262): jxn of duodenum and jejunum; inf mesenteric v. passes to left; retroperitoneal
- Jejunoileum (N 261, 272): peritoneal
  - Jejunum: 8 ft; wall thicker than ileum; plicae circulares (circular folds) more pronounced in jejunum; mesentery has less fat; arterial arcades simpler; arteriae recta longer
  - Ileum: most distal; 12 ft. long
- Circular folds (N 272): covered w/ villi
- Ileoceleal junction (N 273): moderates flow of material from ileum to cecum
Large intestine (N 276): 5 ft. long
  Cecum: rt. lower quad; peritoneal but lacks mesentery
    Ileocecal valve (N 274, 276): marks jxn, has superior/inferior lips
  Appendix (N 273, 274, 276): attached to posteroinferior surface; has its own
    mesentery; infection site
  Ascending colon (N 276): continuous w/ cecum
  Right colic (hepatic) flexure (N 276): jxn of ascending and transverse colon
  Transverse colon (N 276): suspended by transverse mesocolon
  Left colic (splenic) flexure (N 276): jxn of transverse and descending colon
  Descending colon (N 276): pelvic brim is jxn w/ sigmoid colon
  Sigmoid colon (N 276): lower left quad; continuous w/ rectum at S3; suspended by sigmoid
    mesocolon
  Semilunar folds (N 276):
    Teniae coli (N 276, 263): band of longitudinal smooth muscle on surface of large intestine;
    three of them (omentumalis, mesocolica, libera); confluence of the three bands helps locate
    the appendix
  Haustra (sacculations) (N 276): pouches in wall of large intestine where teniae coli is
    deficient
  Omental (epiploic) appendages (N 263, 276): fat filled pendants on large intestine

**Arteries & veins:**

Superior mesenteric a. & v. (N 256, 295, 296, 300, 301, 302): branch of ab aorta at L1; supplies inf
  part of head of pancreas, distal duodenum, jejunum, ileum, cecum, appendix, ascending colon,
  transverse colon

  Intestinal aa. (N 295): supplies jejunum and ileum, 12-15 in number
    Arcades (N 295): branch off intestinal aa. to give off arteriae rectae
    Arteriae rectae (N 295): supply tissue
  Ileocolic a. (& branches) (N 295, 296): supplies cecum, appendix, terminal portion of ileum
  Appendicular a. (N 295, 296): can come off posterior cecal, anterior cecal or ileocolic
    to supply appendix

  Right colic a. (N 295): supplies ascending colon
  Middle colic a. (N 296): supplies transverse colon

Inferior mesenteric a. & v. (N 256, 295, 296, 300, 301, 302): branch of ab aorta at L3; supplies
  splenic flexure, descending colon, sigmoid colon and superior part of rectum; vein does not
  follow same course

  Left colic a. (N 296): supplies descending colon
    Ascending br. of left colic (N 296):
      Sigmoid aa. (N 296): supplies sigmoid colon; 2-3 in number
    Superior rectal a. (N 296): supplies superior part of rectum; continuation of inferior
      mesenteric after sigmoid branches come off; anastomoses w/ middle and inferior rectal aa.
  Marginal a. (N 296): formed by anastomoses of branches of ileocolic, right colic, middle colic, left
    colic and sigmoidal arteries to supply colon

**Clinical Terms:**

Meckel's diverticulum: outpouching of ileum about 2 ft before jxn w/ cecum in 2% of pop; lined
  by stomach type mucosa that can ulcerate, perforate or cause small bowel obstruction; caused by
  failure of vitelline duct to obliterate during embryologic development; can also be ectopic
  pancreatic tissue

Omphalocele: herniation of abdominal viscera through umbilical and supraumbilical ab wall into
  sac covered by peritoneum and abdominal membrane; thin and easily ruptured sac; seen in
  neonatology

Intestinal obstruction: blockage of bowel lumen prohibiting passage material; symptoms include
  constipation, obstipation, ab swelling and pain; treated by iv fluids, rest, nasogastric suction and
  surgery

Peritonitis: marked by exudations in peritoneum of serum, fibrin, cells and pus; attended by ab
  pain and tenderness, constipation, nausea, vomiting, moderate fever
Malrotation of gut: may be associated with narrow attachment of small bowel mesentery; permits rotation, presents as midgut volvulus; surgical emergency due to twisting of vascular pedicle

Volvulus: twisting of intestines causing obstruction and colic

Intussusception: telescoping of one portion of intestine into another