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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 from S2-4 to descending colon

Mesentery of appendix (mesoappendix) (N [273](#)): connects appendix to mesentery 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

Ileocecal fold (N [273](#)): from ileum to cecum; inf to ileocecal 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

Duodenojejunal flexure (N [262](#)): jxn of duodenum and jejunum; inf mesenteric v. passes to left; retroperitoneal

Jejunioileum (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

Ileocecal 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 (omentalis, 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 w/ 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