

**Gastrointestinal
Body Imaging Postgraduate Course - May 15, 2018
SAM References**

Perineal/Perianal Crohn's Disease

Govind B. Chavhan, MD

Ethan A. Smith, MD

1. **What is the approximate percentage of children with Crohn's disease that have perianal disease?**
 - A. <10%
 - B. 20-40%
 - C. 60-80%
 - D. 100%

Correct Answer: B

Rationale: Studies have reported 15-38% of children with Crohn's disease (CD) exhibit perianal disease. Answer A is incorrect. >15% children with CD get perianal disease. Answer C is incorrect. Only up to ~40% children with CD get perianal disease at some time during their disease course. Answer D is incorrect. Only up to ~40% children with CD get perianal disease at some time during their disease course.

References:

- Shenoy-Bhangle A, Gee MS. Magnetic resonance imaging of perianal Crohn disease in children. *Pediatr Radiol.* 2016 May;46(6):838-46.
- Sheedy SP, Bruining DH, Dozois EJ, Faubion WA, Fletcher JG. MR Imaging of Perianal Crohn Disease. *Radiology.* 2017 Mar;282(3):628-645.

2. **What term best describes a linear fluid filled tract that extends through the internal sphincter and then descends in the intersphincteric space to a cutaneous opening?**
 - A. Transsphincteric fistula
 - B. Intersphincteric fistula
 - C. Intersphincteric sinus
 - D. Horseshoe abscess

Correct Answer: B

Rationale: A simple intersphincteric fistula traverses the internal anal sphincter, and then descends in the intersphincteric space to the skin. It does not traverse the external anal sphincter.

References:

- O'Malley RB, Al-Hawary MM, Kaza RK, et al. Rectal Imaging: Part 2, Perianal fistula evaluation on pelvic MRI – What the radiologist needs to know. *Am J Roentgenol AJR* 2012; 199: W43-W53

Crohn's Disease Standardized Nomenclature/Reporting

Kassa Darge, MD

Michael S. Gee, MD, PhD

3. **According to the recently published SAR/AGA consensus reporting guidelines, what term should be used to replace "phlegmon" when describing dense mesenteric inflammation without a well-defined fluid component?**
 - A. Inflammatory mass
 - B. Complex fistula
 - C. Engorged vasa recta
 - D. Sinus tract

Correct Answer: A

Rationale: An inflammatory mass is defined as an ill-defined mass-like process of mixed fat and/or soft tissue attenuation/signal intensity (not frank fluid attenuation/signal intensity). This form of penetrating disease has been previously referred to as “phlegmon”.

Reference:

- [Radiology](#). 2018 Mar;286(3):776-799. doi: 10.1148/radiol.2018171737. Epub 2018 Jan 10. Consensus Recommendations for Evaluation, Interpretation, and Utilization of Computed Tomography and Magnetic Resonance Enterography in Patients With Small Bowel Crohn's Disease. [Bruining DH¹](#), [Zimmermann EM¹](#), [Loftus EV Jr¹](#), [Sandborn WJ¹](#), [Sauer CG¹](#), [Strong SA¹](#); [Society of Abdominal Radiology Crohn's Disease-Focused Panel¹](#).

4. According to the recent SAR/AGA consensus document, what is generally required for penetrating disease to occur in Crohn disease patients?

- A. Luminal narrowing and active bowel wall inflammation
- B. “Creeping” fat
- C. Vasa recta engorgement
- D. Bowel wall T2-weighted signal hypointensity

Correct Answer: A

Rationale: Luminal narrowing and active inflammation are both generally needed for penetrating disease (e.g. fistula, abscess) to occur. In Crohn disease patients .

Reference:

- [Radiology](#). 2018 Mar;286(3):776-799. doi: 10.1148/radiol.2018171737. Epub 2018 Jan 10. Consensus Recommendations for Evaluation, Interpretation, and Utilization of Computed Tomography and Magnetic Resonance Enterography in Patients With Small Bowel Crohn's Disease. [Bruining DH¹](#), [Zimmermann EM¹](#), [Loftus EV Jr¹](#), [Sandborn WJ¹](#), [Sauer CG¹](#), [Strong SA¹](#); [Society of Abdominal Radiology Crohn's Disease-Focused Panel¹](#).

Median Arcuate Ligament Syndrome

James S. Donaldson, MD, FACR

Seng H. Ong, MBBS

5. Which celiac artery ultrasound finding is suggestive of median arcuate ligament syndrome (MALS)?

- A. Tortuosity of the celiac artery
- B. Increase in peak systolic velocity during inspiration
- C. Peak systolic velocity of greater than 200 cm/sec
- D. Mean change in peak systolic velocity with respiration of 20 cm/sec

Correct Answer: C

Rationale: A celiac artery peak systolic velocity of greater than 200 cm/sec is suggestive of MALS.

Reference:

- Mak GZ, Speaker C, Anderson K, et al. Median arcuate ligament syndrome in the pediatric population. *J Pediatric Surgery* 2013; 48; 2261-2270.
- Eliahou R, Sosna J, Bloom AI. Between a Rock and a Hard Place: Clinical and Imaging Features of Vascular Compression Syndromes. *RadioGraphics* 2012; 32; E33-48.

6. Patients with the following clinical symptom generally have good outcomes after surgery for median arcuate ligament syndrome (MALS):

- A. Vomiting
- B. Resting abdominal pain
- C. Post exertional abdominal pain
- D. Weight loss

Correct Answer: C

Rationale: Of patients who get pain relief following surgery for MALS 85% had post-exertional pain pre-operatively. It does not mean that 85% of patients with post exertional pain have MALS! The other symptoms (A,B & D) can be present with MALS however the correlation with improvement following surgery is significantly less."

References:

- Mak GZ, Speaker C, Anderson K, et al. Median arcuate ligament syndrome in the pediatric population. J Pediatric Surgery 2013; 48; 2261-2270.
- Eliahou R, Sosna J, Bloom AI. Between a Rock and a Hard Place: Clinical and Imaging Features of Vascular Compression Syndromes. RadioGraphics 2012; 32; E33-48.

Small Bowel Tumors

Jesse Courtier, MD

Ellen M. Chung, MD

- 7. Which of the following is the most common gastrointestinal tract neoplasm in the pediatric population?**
- A. Burkitt lymphoma
 - B. Juvenile polyp
 - C. Carcinoid tumor
 - D. Gastrointestinal stromal tumor (GIST)

Correct Answer: B

Rationale: Juvenile polyps are the most common neoplasm of the pediatric gastrointestinal tract.

Reference:

- Hart J, Wilcox R, Weber CR. The gastrointestinal tract. In: Stocker JT, Dehner LP, Husain AN, eds. Stocker and Dehner's Pediatric Pathology. 3rd ed: Lippincott Williams & Wilkins, 2010; pp. 574-639.

- 8. Which of the following best describes the most common imaging appearance of Burkitt lymphoma?**
- A. Focal mural mass in the jejunum
 - B. Diffuse polypoid masses throughout the small bowel
 - C. Bulky mass involving the distal ileum and cecum
 - D. Aneurysmal dilation of the small bowel

Correct Answer: C

Rationale: Burkitt lymphoma of the GI tract most commonly presents as a bulky mass of the distal ileum and cecum.

References:

- Biko DM, Anupindi SA, Hernandez A, Kersun L, Bellah R. Childhood Burkitt lymphoma: abdominal and pelvic imaging findings. AJR American journal of roentgenology. 2009;192(5):1304-15.
- Ghai S, Pattison J, Ghai S, O'Malley ME, Khalili K, Stephens M. Primary gastrointestinal lymphoma: spectrum of imaging findings with pathologic correlation. Radiographics : a review publication of the Radiological Society of North America, Inc. 2007;27(5):1371-88.