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MR imaging in a case of primary epiploic appendagitis in a 12 years girl

Sergio Salerno, Paola Carcione, Marcello Cimador, Giuseppe Lo Re, Massimo Midiri
University Hospital Policlinico, Palermo (Italy)

Purpose-Objective. Primary epiploic appendagitis (PEA) is an inflammation of epiploic appendages usually self-limited, that may rarely result in abscess formation and infrequently affect childhood. MR findings of PEA are presented, stressing the useful tools of MR in differential diagnosis and treatment monitoring without ionizing radiation.

Material and methods. A 12 years old girl with acute abdominal pain, fever and leucocytosis with a clinical and ultrasound examination revealing a painful right abdominal mass consistent with an abscess was submitted to MR to ascertain the origin of the abscess.

Results. 1.5 T MR scan examination was performed before and after contrast medium showing a mass medially in the colon hepatic flexure, with thick septa that enhanced after contrast and a thickening of the omental fat involving the epiploic appendage, excluding appendicitis or Crohn disease. A follow up scan performed after 1 week of antibiotics treatment with low response on MRI showed slight reduction in size. Laparotomy with partial excision of epiploon, draining of abscess cavities, nodal biopsy was performed. At pathology the excised epiploon was widely occupied by inflammatory lympho-ganulomatoid tissue.

Discussion and conclusions. PEA rarely results in a abscess, which origin could be difficult to demonstrate with US or CT excluding appendicitis or Crohn disease. MR imaging can provide exquisite anatomic, functional information without the need for ionizing radiation for the evaluation of small-bowel disorders.

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Imaging in paediatric intestinal failure associated liver disease (IFALD)

Tom Watson, Kieran Mchugh, Susan Hill
Great Ormond Street Hospital For Children Nhs Foundation Trust, London (United Kingdom)

Purpose-Objective. 1. To review the common hepatobiliary pathology in patients with IFALD from a tertiary level nutrition unit. 2. To determine well the concomitant liver function tests correlate with the imaging.

Material and methods. Retrospective review of the radiology PACS system and gastroenterology database. All patients with IFALD were included. All hepatobiliary imaging was evaluated.

Results. 43 (24 male) children were included. All parenteral nutrition (PN) had been administered for between 4 months and 17 years. 293 ultrasounds and 8 MRIs were performed on the children during their time on PN. 39 (91%) patients had abnormal imaging on one or more ultrasounds. Concomitant LFTs were analyzed and the positive and negative predictive values were 52% and 41% respectively. Gallbladder pathology was the most common pathology, seen in 26 (60.4%) patients. 4 (15%) of these patients underwent a cholecystectomy which is above the expected rate in the general population. The time interval between initiation of PN and onset of biliary abnormalities ranged from 2 months to 16 years.

Discussion and conclusions. Biliary pathology is common in children on long-term PN and LFTs do not appear to correlate with the imaging findings. Regular imaging is important to monitor for those patients who require surgical intervention.

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Administering oral contrast, a novel solution

Siva Muthukumarasamy [1], Dipalee Durve[2]
[1] Guy's And St Thomas' Nhs Trust, London (United Kingdom); [2] Evelina London Children's Hospital, London (United Kingdom)

Purpose-Objective. To review and present methods of administering oral contrast in children.

Material and methods. In the paediatric age group, the quality of an upper GI contrast study may be significantly compromised by ones ability to persuade the child to drink sufficient contrast medium. Persuading children to drink a white powdery substance in any significant quantity is one of the skills that all paediatric radiologists need to hone. We describe different methods of oral contrast administration, including our own novel way of increasing compliance in this age group of fussy eaters. Our technique involves partially replacing the contents of a well known soft drink with oral contrast.

Results. The bottle design with its opaque exterior and large perforated nozzle make it an ideal device for administering oral contrast. Its familiarity, popularity and taste also make it readily accepted by both children and their parents.

Discussion and conclusions. We would recommend this technique in children over the age of 1 year.