Case 14426

Eurorad

Gastrointestinal manifestations of Systemic Lupus Erythematosus: What needs to be considered in an acute setting?

Published on 25.03.2017

DOI: 10.1594/EURORAD/CASE.14426
ISSN: 1563-4086
Section: Abdominal imaging
Area of Interest: Colon Abdomen
Procedure: Decision analysis
Imaging Technique: CT-Angiography
Imaging Technique: CT
Special Focus: Acute Pathology Biological effects
Case Type: Clinical Cases
Authors: Anirudh V Nair1, Soumya Anirudh2, Manoj K S 3 , Ramachandran PV 4
Patient: 54 years, female

Clinical History:

A patient with a known case of SLE, chronic kidney disease, presented to the ER with worsening abdominal pain of 1-day duration with a bloody tinge in stool. Laboratory tests showed anaemia (Hb-8gm/dl), raised ESR-23 mm/h, Prolonged PTT, Anticardiolipin and ANA positive, raised creatinine-1.8 and normal liver function tests. No history of prior anticoagulants.

Imaging Findings:

Computed Tomography (CT) of the abdomen with contrast (Fig-1) revealed long segment concentric wall thickening of the ascending colon until the mid transverse colon, giving a target appearance in axial sections. The inner mural layers appeared hyperdense on plain scan, consistent with intramural haemorrhage. The superior mesenteric vessels were patent. There was also hyperdensity (70HU) tracking along the rectus sheath, suggestive of rectus sheath hematoma. The CT features of rectus sheath hematoma and long segment concentric wall thickening was attributed to lupus vasculits.

Discussion:

Background:

Systemic lupus erythematosus (SLE) is a chronic immune mediated multisystemic disorder commonly affecting women aged between 20 and 45 years, but may also affect both sexes and all age groups including children. The aetiology is largely unknown, however the role of viral, hormonal, environmental and genetic factors are attributed. American college of Rheumatology (ACR) classification criteria suggests at least 4 or more of the 11 features (Malar rash, Discoid rash, Photosensitivity, Oral ulcers, Arthritis, Serositis, Renal disorder, Neurologic disorder, Hematologic disorder, Immunologic disorder, Antinuclear antibody-ANA) are needed for a diagnosis of SLE.

Clinical Perspective:

The reported incidence of gastrointestinal manifestations of SLE varies between 1.3% and 27.5% [1]. The most

common symptomatic presentation of abdominal manifestation of SLE is anorexia, nausea and vomiting. However patients may also present with dysphagia, abdominal pain, malena, diarrhoea or chronic constipation [2]. Although only renal involvement forms part of diagnostic criteria amongst solid organs in the abdomen, effort should be made to rule out multi-organ abdominal involvement when the patient presents with abdominal symptoms [3]. The approach to an SLE patient presented with acute abdomen is summarised in fig-3.

Imaging perspective: (Fig-2)

Abdominal imaging manifestations [2-6] are summarised in fig:2. However, radiological differentiation of abdominal SLE related vasculitic manifestations from other causes is challenging. In lupus, the medium or small vessel disease will combine with atherosclerotic, thrombotic disease resulting in auto-inflammatory driven degeneration of the wall or may co-exist with SLE related drug/infection/autoimmune process [7]. Thus biopsy would be necessary to ascertain the cause of pathology, and a history of SLE must never be overlooked.

Outcome:

Patients might need prompt high dose steroids and immunosupressants, once the possibility of infection and other primary diseases are ruled out. If the patient fails to respond to medical management and or deteriorates, surgical resection of the non-viable bowel segments would improve the prognosis.

In our case, a diagnostic laparoscopy was done, showing normal appearing bowel loops with non-expanding rectus sheath hematoma with biopsy confirming lupus vasculitis. The patient was started on high dose steroids and immunosuppressive agents. The patient improved symptomatically and was discharged a week later.

Teaching points:

1. Gastrointestinal manifestations of SLE are not uncommon, and may mimic other primary abdominal organ involvement if history of an underlying SLE is overlooked.
2. SLE patients presenting with a gastrointestinal symptom, drug related side effects, infective causes or vasculitic sequalae may occur.

Differential Diagnosis List: Lupus vasculitis with ischemia of ascending colon.Rectus sheath hematoma., Mesentric ischemia, Inflammatory bowel disease, Association of SLE with gastrointestinal autoimmune diseases mimicking lupus vasculitis

Final Diagnosis: Lupus vasculitis with ischemia of ascending colon.Rectus sheath hematoma.

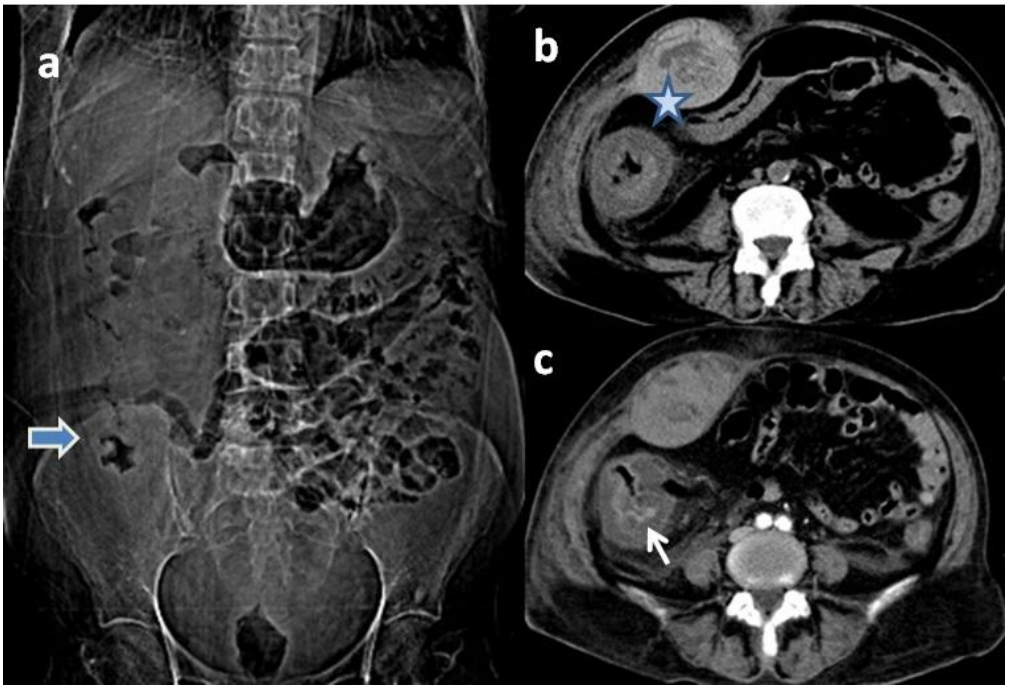
References:

Xu D, Yang H, Lai CC, Li P, Zhang X, Yang XO et-al (2010) Clinical analysis of systemic lupus erythematosus with gastrointestinal manifestations. Lupus 19:866-9 (PMID: 20410154)
M Fawzy, A Edrees, H Okasha, A El Ashmaui, G Ragab (2016) Gastrointestinal manifestations in systemic lupus erythematosus. Lupus 25(13):1456-1462 (PMID: 27055518)
Xu D, Yang H, Lai CC, Li P, Zhang X, Yang XO et-al (2010) Clinical analysis of systemic lupus erythematosus with gastrointestinal manifestations. Lupus 19:866-9 (PMID: 20410154)
Kirby JM, Jhaveri KS, Maizlin ZV, Midia M, Haider E, KhaliliK (2009) Abdominal manifestations of systemic lupus erythematosus: spectrum of imaging findings. Can Assoc Radiol J 60:121-32 (PMID: 19591763)
Min JK, Byun JY, Lee SH, Hong YS, Park SH, Cho CS et-al. (2000) Urinary bladder involvement in patients with systemic lupus erythematosus: with review of the literature. Korean J Intern Med 15:42-50 (PMID: 10714091)
Lee CK, Ahn MS, Lee EY, Shin JH, Cho YS, Ha HK et-al (2002) Acute abdominal pain in systemic lupus

erythematosus: focus on lupus enteritis (gastrointestinal vasculitis). Ann Rheum Dis 61:547-50 (PMID:12006332)
Athina Pyrpasopoulou, Sofia Chatzimichailidou, Spyros Aslanidi (2012) Vascular Disease in Systemic Lupus Erythematosus. Autoimmune Diseases 2012;4

Figure 1

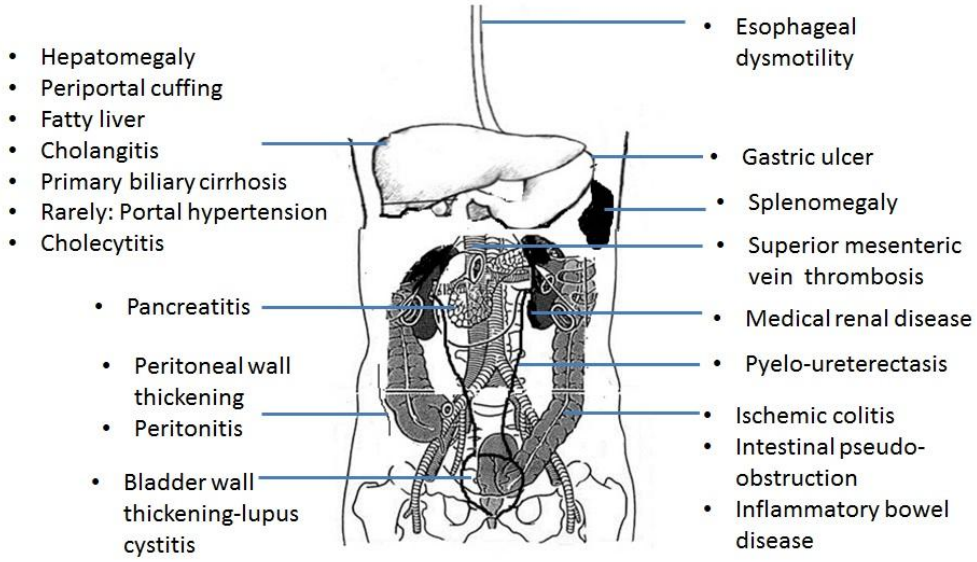
a



Description: Fig-1: (a)Topogram of abdomen showing thumb-printing (arrow) suggestive of ischemic colitis; (b) Axial sections plain & post contrast showing rectus sheath hematoma (star); (c)target appearance (white arrow) of ascending colon with intramural haemorrhage. **Origin:** Dept of Amrita Institute of Medical Science, Kochi, Kerala, india

Figure 2

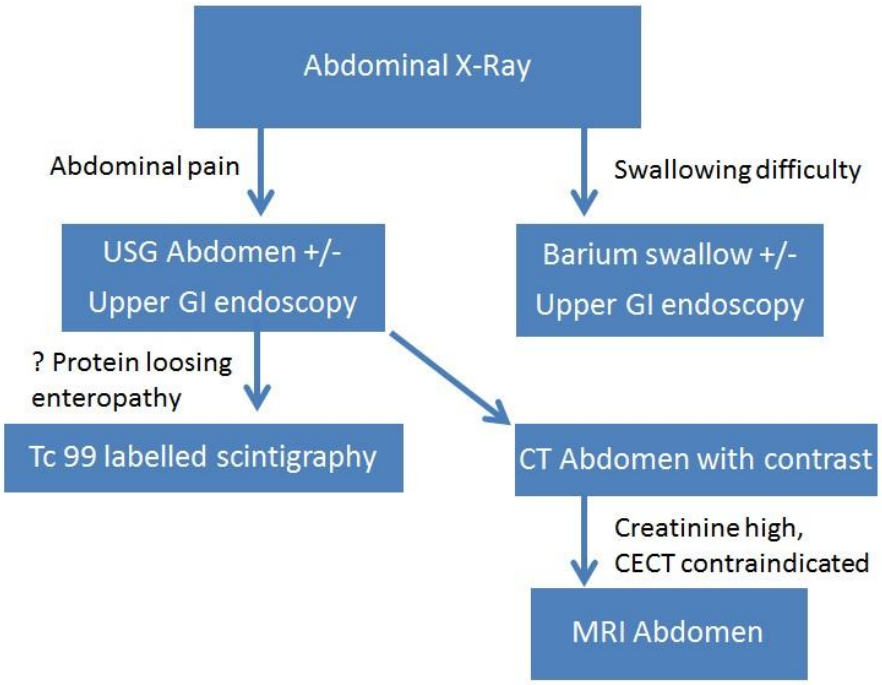
a



Description: Fig-2: Summarises gastrointestinal manifestations of SLE. **Origin:** Dept of Amrita Institute of Medical Science, Kochi, Kerala, india

Figure 3

a



Description: Fig-3: Diagnostic imaging pathway in SLE presenting with acute abdomen **Origin:** Dept of Amrita Institute of Medical Science, Kochi, Kerala, india