Case 2630

A case of gastrointestinal vasculitis due to systemic lupus erythematosus: MRI examination before and after treatment

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Section: Abdominal imaging
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Case Type: Clinical Cases
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Patient: 26 years, male

Clinical History:

Abdominal pain, diarrhoea and two months of continued fever.

Imaging Findings:

The patient was referred to our department after two months of continued abdominal pain, diarrhoea and prolonged fever, up to 39 °C, not responding to antibiotic treatment. On admission he referred a 10 kilos weightloss in the prior two months. The laboratory studies showed an erythrocyte sedimentation rate (ESR) of 115 mm/h, normochromic and normocytic anaemia, and elevated C-reactive protein (CPR). White blood cells were elevated with lymphopenia and neutrophilia. Stool samples were positive for occult blood. Serum concentrations of IgG and IgE were elevated and there was a high turnover of complement. A significant value of autoantibodies against extractable nuclear antigens (ENA and anti-Ro) were detected by Western blot analysis.

Abdominal ultrasound was performed, demonstrating a hyperechogenic abdominal fluid collection and thickening of the entire colonic mucosa. For further evaluation an MR examination was performed after oral administration of polyethylene glycol contrast agent, using a 1.5T magnet (Magnetom, Vision Plus, Siemens; Erlange, Germany) equipped with phased-array body-coil. The study was performed within one breath-hold by using a HASTE T2-weighted and plain and post-contrast fat suppressed FLASH T1-weighted sequences. MR images showed a consistent wall thickening extending from sigmoid colon to the cecum. After contrast medium injection the bowel wall became highly enhanced, a finding of submucosal edema and mucosal inflammation. Small bowel was not involved.

Colonoscopy revealed the alterations highly suggestive of extensive vasculitis, confirmed by the histology for systemic lupus erythematosus (SLE). After four weeks of immunosoppressive therapy MRI showed acompletely normal entire colonic mucosa, a finding confirmed by colonoscopy.

Discussion:

Gastrointestinal lupus vasculitis is a rare complication (0.2-2%). It may affect every part of the gastrointestinal tract and may lead to ulceration, haemorrhage, perforation or infarction.

The differential diagnosis of lupus with GI vasculitis includes lupus peritonitis, intestinal perforation, Crohn’s disease, ulcerative colitis, protein-losing enteropathy and cytomegalovirus infection of the GI tract leading to acute abdomen, ulceration, and massive bleeding.

Abdominal radiography may not be very useful in the early course of the disease. Abdominal ultrasound, CT and
MR examination are useful tools in diagnosing ascites and abscesses. In our case, the intestinal vasculitis of the colonic and rectal mucosa explaining the abdominal pain was confirmed by colonoscopy. The therapy needs to be considered early in active SLE in order to prevent severe complication.

**Differential Diagnosis List:** Gastrointestinal vasculitis in systemic lupus erythematosus (SLE)

**Final Diagnosis:** Gastrointestinal vasculitis in systemic lupus erythematosus (SLE)

**References:**

**Description:** Axial T2 and T1 pre contrast images show wall thickening of descending and ascending colon. Acute inflammation of the mucosa and submucosa is appreciated on T2w image as a high signal intensity. **Origin:**
Description: Same as 1a. Origin:
Description: After contrast medium injection the inflammed colonic wall shows intense enhancement with normal the small bowel wall. Origin:

Description: Same as 2a. Origin:
**Figure 3**

**Description:** A MR scan one month after immunosuppressive therapy shows decreased size of the colonic wall within normal limits and resolution of the inflammatory process. **Origin:**