Multiple bowel perforations in systemic lupus erythematosus

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ABSTRACT
Systemic lupus erythematosus (SLE) is a connective tissue disorder that has rarely been seen with acute surgical manifestations. Intestinal perforation is one of the most devastating complications of SLE which necessitates prompt surgical intervention. We report a case having multiple intestinal perforations on exploration and has undergone primary repair. SLE should be taken into account as a diagnosis of choice in patients with bowel perforation.

Key Words: Intestinal perforation; lupus erythematosus

INTRODUCTION
The prevalence of systemic lupus erythematosus (SLE) reaches its peak especially among the women of reproductive age. The most common gastrointestinal (GI) symptoms of SLE are nausea, diarrhoea and dyspepsia. The most dangerous type of SLE is mesenteric vasculitis, which manifests itself with acute abdominal pain characterized by abdominal cramps, vomiting and diarrhoea. Intestinal perforation might also occur. Abnormal levels of liver enzymes have been reported in 40% of the cases and serum transaminase levels are also higher in patients with active SLE. Although no correlation has been found between higher levels of serum transaminase and hepatic damages, these levels can be balanced upon treatment.\(^1\) In SLE, fatal complications such as GI tract perforation may occur even before the activity criteria of the disease are observed.\(^2\)

CASE REPORT
A 19-year-old woman was admitted to the emergency department with loss of appetite, diarrhoea and abdominal pain. On examination, abdominal defence and rebound tenderness were found. Parasynthesis revealed a purulent fluid. Rectal examination was normal. Axillary temperature was 38.5°C. Additionally, malar rash was noted on her face. Multiple fluid-gas levels and subdiaphragmatic free air were observed in the abdominal film. There was pleural effusion in the left basal region on her chest X-ray. Total blood count had Hb: 6.5 gr./dl, Hct: %20.6, WBC:11000/mm³ values, and revealed normocytic, normochromic anaemia. Urinalysis produced leucocyte and erythrocyte casts. Antinuclear antibody (ANA): negative, Anti-ds DNA: negative, Scl 70: negative, C3c: high, VDRL: negative, SLE Latex Quick: negative.

The patient was diagnosed as acute abdomen and immediately underwent a laparotomy. Multiple intestinal perforations, that were approximately 1.5-2 x 1 cm in largest size, two of which were in the jejunum, four in the ileum and one in the colon were discovered. All perforations were primarily repaired and a loop ileostomy was constructed. Biopsy specimens were taken from the perforated edges of the intestinal wall.

The patient stayed at intensive care unit, during the postoperative period. Through the follow-up, the patient had high fever, anaemia, minimal elevation of serum liver enzyme levels. She developed a septic state. Serology ruled out typhoid fever and culture was negative. She has experienced a depression and anxiety that was continued until discharge by
remissions and exacerbations. Alopecia and polyarthralgia became manifested in the postoperative period.

She had diagnosis of pneumonitis postoperatively. Blood and sputum cultures were negative. Diagnosis was confirmed by computerised chest tomography.

Histopathological examination of the bowel and the facial skin confirmed the diagnosis of SLE. In the microscopic examination of the bowel, a cellular infiltration of mixed type, which pervaded the whole wall, was observed. A vascular congestion and fibrinoid necrosis particles on the serosal surface were seen, as well as ulceration in the mucosa (Figure 1).

In the histopathological examination of the skin punch biopsy, a slight vacuolar degeneration was detected in the basal layer and it had progressed more in the upper dermis, a perivascular lymphocyte infiltration was also observed in the upper and middle dermis (Figure 2). Malar rash, sensitivity to sunlight, serositis, renal disease (proteinuria, cellular cylenders), anxiety-depression, and anaemia were the positive findings of our case.

**DISCUSSION**

Lesions in SLE could occur in multiple or singular forms and attention should be paid during explorations not to overlook this fact. It would be of crucial importance to take into consideration SLE as a cause of non-traumatic intestinal perforations.[1] Abdominal pain is a recurrent symptom which is seen in half the patients of SLE. Al-Hakeem *et al* reported nine patients with SLE with complications such as cholecystitis, perforated ulcers, colonic perforation, diverticulitis and adhesions.[3] Chulakamontri reported a 41-year-old SLE patient with a giant perforated ulcer on the posterior wall of the rectum below the peritoneal reflection. The ulcer recovered to a certain degree following transverse colostomy.[4]

Negative serologic findings have been reported in 5% of the SLE cases. Clinical findings in ANA negative lupus are manifested as skin rashes, sensitivity to the sunlight, Reynaud phenomena and serositis.[1]

Lung and pleura involvement are seen in 50-70% of patients with SLE and diffuse or patchy alopecia is seen in 70% of these patients. In acute lupus pneumonia, dyspnoea, cough, high fever are seen but no growth in blood and sputum cultures is observed.[3] In the postoperative period, we have also observed pneumonia but blood and sputum cultures were negative. The patient was given a non-specific treatment.

Takahashi *et al* revealed that half the patients (6 of 11 patients) with SLE who developed intestinal perforation died.[5]

In patients diagnosed with perforations, SLE should be remembered as a diagnosis of choice. SLE findings may be masked by clinical manifestations of acute abdomen. In SLE patients with abdominal pain, laparotomy should be considered as a diagnostic tool.

**REFERENCES**


