SAGE Open Medical Case Reports
Volume 12: 1–5
© The Author(s) 2024
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/2050313X241247433
journals.sagepub.com/home/sco
Sage

Lupus enteritis as systemic lupus erythematosus main manifestation: Two case reports

Camilo Andrés Chaparro[1,2], Santiago Bernal-Macías[2,3] and Oscar Mauricio Muñoz[1,2]

Abstract

Lupus enteritis denotes inflammation of the intestinal walls resulting from the influence of systemic lupus erythematosus. It represents a rare manifestation associated with notable morbidity and mortality, marked by nonspecific gastrointestinal symptoms. In this article, we present two cases of individuals experiencing severe gastrointestinal symptoms. They had a personal or familial history of autoimmunity with intestinal involvement consistent with the presentation of lupus enteritis. Following treatment with glucocorticoids and immunomodulators, both patients exhibited a satisfactory clinical evolution. While lupus enteritis remains an uncommon occurrence, its clinical significance is undeniable. Hence, it is imperative to maintain a high level of clinical suspicion to facilitate prompt diagnosis and treatment.

Keywords

Systemic lupus erythematosus, lupus enteritis, vasculitis

Date received: 8 October 2023; accepted: 28 March 2024

Introduction

Systemic lupus erythematosus (SLE) stands as a complex multisystem disease characterized by diverse clinical manifestations, imposing a considerable burden of disease. While the musculoskeletal, cutaneous, renal, hematological, and central nervous systems commonly bear the impact of this condition, the scope of its compromise transcends these boundaries. Among other manifestations of SLE, gastrointestinal involvement is relatively prevalent,[1,2] typically presenting as mild and nonspecific symptoms. However, within this spectrum, there exists a subset of severe manifestations, notably exemplified by lupus enteritis.[3]

Despite the growing body of knowledge surrounding SLE, comprehensive insights into lupus enteritis remain limited, and documented instances of it serving as the primary or predominant indicator of SLE activity are sparse.[3–7] In this article, we present a report of two distinctive cases involving patients diagnosed with lupus enteritis. One of these cases presents lupus enteritis as the inaugural manifestation of SLE, while the other relates to a patient with a pre-established SLE diagnosis. Through a meticulous exploration of their diagnostic process, treatment strategies, and subsequent monitoring, we aim to contribute to the understanding of this intricate clinical entity.

Case reports

Case 1

A 65-year-old woman consulted with no medical history, but with a family history of autoimmunity, as her brother was diagnosed with SLE and her son with type 1 diabetes mellitus. She presented with 6 days of acute, severe abdominal pain, and diarrhea accompanied by mucus, without blood. In the following 4 days, the stool stopped completely but her condition was complicated by frequent vomiting, up to 12 times a day, with bilious content. When questioned, she stated that she had been experiencing nonspecific symptoms for approximately 4 months, such as hyporexia and significant weight loss of approximately 10 kg, associated with xerostomia, xerophthalmia, patchy hair loss, and symmetric

[1]Internal Medicine Department, Hospital Universitario San Ignacio, Bogotá, Colombia
[2]Faculty of Medicine, Pontificia Universidad Javeriana, Bogotá, Colombia
[3]Rheumatology Department, San Ignacio University Hospital, Bogotá, Colombia

Corresponding Author:
Camilo Andrés Chaparro, Internal Medicine Department, San Ignacio University Hospital, Cra 7 # 40-62, Bogotá 11023, Colombia.
Email: ca-chaparro@javeriana.edu.co

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage).

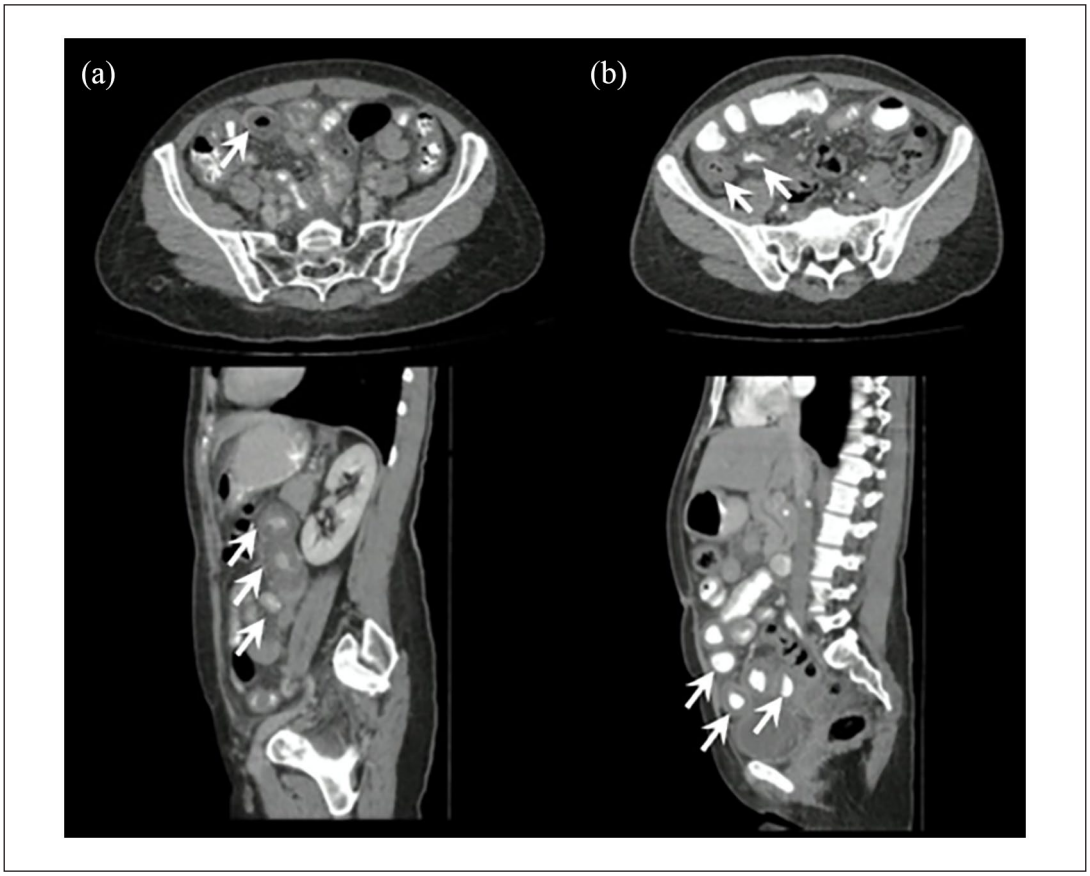

Figure 1. Contrast-enhanced tomography of case 1 (a) and case 2 (b) with intestinal wall edema, alteration in wall attenuation represented with the "double halo" sign (arrows), and dilation of the intestinal lumen.

joint pain primarily localized to the upper extremities. In addition, the patient reported the appearance of lesions consistent with livedo racemose in the lower extremities, with an exacerbation of these lesions over the past few weeks.

During the previous 4 months, she was studied extensively; a contrast-enhanced tomography of the abdomen reported finding diffuse thickening of the small bowel walls with predominant involvement of the jejunum and mild ascites, urinalysis with active sediment and normal endoscopic studies, but she was discharged without conclusive diagnosis and specific management.

A new abdominal computed tomography (CT) was performed due to the persistence of symptoms despite conservative management and showed significant disease progression with generalized thickening of the walls of the duodenum, jejunum, ileum, sigmoid colon, and rectum (Figure 1(a)). Vasculitis, infection, and inflammatory bowel disease (IBD) were considered as possible differential diagnoses, with other autoimmune diseases such as celiac disease less likely. This prompted new endoscopic studies that revealed only antral erythematous gastritis and a completely normal colonoscopy; biopsies performed during these procedures reported no discernible microscopic findings consistent with IBD, no presence of villous atrophy, or other abnormal findings. Microbiological cultures for common pathogens and mycobacteria performed on biopsy tissue were negative. Ancillary studies were performed concurrently and revealed high titers of antinuclear antibodies (ANA), positive anti-LA and anti-RO antibodies, depleted complement levels, and significant non-nephrotic proteinuria. There were no markers of systemic inflammatory response or positive acute phase reactants. In addition, the chest CT scan revealed bilateral pleural effusions consistent with a transudative process. Extended laboratory data are described in Table 1.

The diagnosis of lupus erythematosus was considered. It was proposed that lupus enteritis could be the main manifestation, possibly accompanied by intestinal pseudo-obstruction. At the same time, polyserositis, nephritis, and hypocomplementemia were considered. A therapeutic strategy of methylprednisolone 500 mg daily for 3 days was promptly initiated, with rapid and complete improvement of the initial symptoms. Subsequent treatment included cyclophosphamide at a dose of 750 mg every 28 days for a total of six doses, followed by an ongoing regimen of oral corticosteroids and daily doses of chloroquine at 250 mg.

At the 5-month follow-up visit, the patient reported consistent symptom control with no relapses or exacerbations.

Table 1. Summary of relevant clinical characteristics and studies of cases 1 and 2.

Variable	Case 1	Case 2
Age, sex	65 years Female	34 years Female
Past medical history	None Family: SLE (brother), Type 1 DM (Son)	SLE (9 years ago), APS (3 years ago)
Symptoms	Abdominal pain, nausea, emesis, diarrhea, hyporexia, involuntary weight loss. Four days of constipation.	Abdominal pain, nausea, emesis, diarrhea.
Duration of symptoms	4 months	6 months
CT findings	Diffuse thickening of the walls of the duodenum, jejunum, ileum, sigmoid colon, and rectum. Ascites.	Thickening and edema of the walls of the ileum, transverse, and ascending colon with dilation. Dilated mesenteric vessels.
Relevant studies	WBC:7600 Neut:5300 Lymph:1400 Hgb:13.9 Plt:277900 ESR: 19 CRP:0.5 ANA 1:2560 Positive Anti Ro (SS-A) and anti-La (SS-B). Negative anti-DNA. Consumed C3 y C4. PCR: 1.59.	WBC:3400 Neut:1600 Lymph:1200 Hbg:11.1 Plt:243 ESR:8 CRP: 0.3 ANA 1:1280 Positive Anti-SM y Anti-RNP. Negative anti-DNA. Consumed C3 y C4. PCR: 2.55
Treatment	Methylprednisolone 500 mg for 3 days, cyclophosphamide 750 mg every 28 days for six doses, continued prednisolone 20 mg daily, chloroquine 250 mg daily.	Methylprednisolone 125 mg for 3 days, continued hydroxychloroquine 200 mg daily, azathioprine 50 mg twice daily, prednisolone 20 mg daily.

APS: antiphospholipid syndrome; C3/C4: fractions 3 and 4 of the complement system; CRP: C-reactive protein (Normal 0–0.5 mg/dL); ESR: erythrocyte sedimentation rate (normal: 0–20 mm/h); Anti-RNP: Anti ribonucleoprotein U1 antibodies; PCR: urinary protein/creatinine ratio; SLE: systemic lupus erythematosus.

Case 2

A 34-year-old woman with a 9-year history of SLE without significant complications and a 3-year history of antiphospholipid syndrome, which was diagnosed after finding a hepatic vein thrombosis requiring chronic anticoagulation with warfarin as secondary prevention, presented with a 2-month history of abnormal uterine bleeding. Evaluations ruled out complications related to coumarin use, but in the interview, her symptoms were further characterized by diffuse, high-intensity, episodic abdominal pain associated with nausea, postprandial vomiting, and diarrhea without mucus or blood; these symptoms recurred over 6 months, approximately 2–3 days per week.

Physical examination revealed the presence of arthralgia as the primary abnormality in addition to abdominal pain. Notable laboratory findings included a low complement level, proteinuria, and pyuria on urinalysis. Considering an extensive differential diagnosis in a patient with a history of SLE under immunosuppressive treatment, previous splanchnic vascular complications, and chronic abdominal symptoms, a contrast-enhanced CT scan was performed, showing thickening and edema within the ileum walls, as well as dilatation of the transverse and ascending colon. Dilated mesenteric vessels were also noted, with no evidence of other vascular abnormalities (Figure 1(b)). Endoscopic studies, including esophagogastroduodenoscopy, revealed bulboduodenal atrophy, and colonoscopy was normal. Biopsies taken at both procedures were reported as normal, and microbiologic cultures for common pathogens and mycobacteria performed on biopsy tissue were also negative, reasonably ruling out other diagnostic suspicions of infectious involvement, IBD, and other less common diagnoses. Parallel studies showed the absence of acute phase reactants, with positive anti-SM and anti-RNP antibodies, with complement depletion and significant non-nephrotic proteinuria. Complete relevant data are available in Table 1.

Based on the available information, moderate to severe SLE activity with gastrointestinal involvement was diagnosed, specifically lupus enteritis. A therapeutic regimen was initiated, starting with methylprednisolone at 125 mg for 3 days, supplemented by hydroxychloroquine at 200 mg daily and azathioprine at 50 mg every 12 h. Complete improvement of abdominal pain was observed within a few days. The same long-term management approach was maintained, with prednisolone doses adjusted accordingly. At the 6-month follow-up visit, the patient reported no new or recurrent symptoms.

Discussion

We present two illustrative cases of patients with severe gastrointestinal symptoms in which the context of an SLE diagnosis revealed lupus enteritis as the underlying cause of their manifestations.

Throughout history, this entity has been difficult to characterize due to the lack of a standardized definition. It has been referred to in literature using various terms, such as mesenteric arteritis, intestinal vasculitis, enteric vasculitis, or mesenteric vasculitis.[1] In 2004, a significant step was taken when it was

included in the BILAG (British Isles Lupus Assessment Group) classification criteria. It is defined as "vasculitis or inflammation of the small intestine supported by imaging findings and/or biopsy, with a very broad spectrum of manifestations."[2] Pathophysiologically, the changes in the bowel wall correspond to inflammation of small vessels and venules, immune complex deposition, and complement activation, which lead to endothelial cell and platelet activation.[3] One proposed mechanism is the presence of antiphospholipid antibodies that trigger these changes. The jejunum and ileum are frequently affected locations in the gastrointestinal tract, with involvement typically occurring in multiple vascular territories. This is often multi-segmental in nature.[4–6]

Gastrointestinal symptoms are common in patients with SLE, affecting up to 60% of them. Typically, these symptoms are mild and attributed to secondary infections or adverse drug reactions. However, during episodes of severe disease activity, at least 6% of patients reported related gastrointestinal symptoms,[3,7] which are usually nonspecific. Lupus enteritis is a rare but noteworthy gastrointestinal manifestation of SLE, along with other entities such as autoimmune pancreatitis, intestinal pseudo-obstruction, and acalculous cholecystitis.[1] Limited information is currently available on lupus enteritis, and there have been few reported cases of it as the first manifestation of SLE.[8] There is a lack of complete understanding regarding the risk factors. It is believed that triggers such as bacterial infections, cytomegalovirus infection, eosinophilia, use of nonsteroidal anti-inflammatory drugs, or environmental exposure to various chemicals or metallic particles may be involved. The presence of central or peripheral nervous system activity, thrombocytopenia, or hypocomplementemia may be related to the appearance of this manifestation.[9]

The most frequent clinical manifestations are abdominal pain (97%), ascites (78%), nausea and vomiting (45%), diarrhea (42%), and fever (20%).[1,10] All of the aforementioned symptoms were present in both cases, except for ascites which was absent in case 2. The patient's symptoms had been present for several weeks and led to hospitalization and prior investigative efforts. Diagnostic evaluation mainly relies on CT scans or magnetic resonance imaging, which reveal hallmarks such as intestinal wall edema, alterations in wall attenuation, luminal dilation, and concomitant serositis.[11,12] In both cases, the patients were diagnosed via tomography, which revealed small intestine wall thickening accompanied by changes in wall attenuation (see Figure 1(a) and 1(b)). In addition, case 1 exhibited ascites. Regarding the literature review, the method of diagnosis in most cases after ruling out the most common manifestations of SLE. Although the imaging methods mentioned above are highly sensitive for making a diagnosis, they have limitations. The changes described may not appear until later stages, the use of contrast media may restrict their use, and the presentation and severity of changes can vary. In a case series of 34 patients, only 6% exhibited positive biopsy results, usually of vasculitis, while the rest had normal or nonspecific findings such as mucosal edema or hyperemia, wall thinning, or unrelated findings.[1] It is important to note that pathology is not a highly sensitive diagnostic method. Endoscopic studies were conducted to take biopsies and study differential diagnoses, including viral, mycobacterial, fungal, and celiac disease. The pathology reports did not reveal any significant findings, which is in line with the observational data. Other tests, such as anti-endomysium and IgA transglutaminase, were not conducted due to the low association of celiac disease with SLE.[13] Given the limitations of these diagnostic methods, there is a need for more sensitive and specific imaging tests to diagnose this condition and to evaluate the possibility of identifying serologic markers to aid in diagnosis.

The treatment for our patients began with intravenous glucocorticoids. In case 1, cyclophosphamide was added to the regimen due to concurrent renal activity. After an initial phase, the management shifted to oral glucocorticoids and antimalarial agents. In case 2, the prolonged symptoms and severe manifestations required the initiation of azathioprine for maintenance. While treatment protocols for lupus enteritis lack substantial empirical support, our interventions align with existing reports. In a retrospective study of 141 patients, glucocorticoid management was the primary treatment, administered either intravenously or orally, depending on the severity of the activity. The doses ranged from 40 mg/day to 30 mg/kg/day of methylprednisolone, with an average duration of 4 days. Most patients received only this treatment. However, depending on the evolution and activity of the disease in other systems, the possibility of using cyclophosphamide in doses of 500–750 mg/m^2 was considered. In scenarios where there was a relapse, other treatments such as azathioprine, MMF, or rituximab were also contemplated. Although prognostic information is also limited, in most cases, corticosteroid treatment alone resulted in symptomatic improvement and imaging changes. When other immunosuppressants were used, outcomes depended mainly on the activity of SLE in those other systems. Approximately 11% of cases resulted in complications of intestinal necrosis or perforation, requiring surgical management.[1]

Conclusion

Lupus enteritis is a rare presentation within the spectrum of SLE manifestations which warrants attention due to its reported morbidity and mortality. It should be investigated in individuals displaying signs of disease activity or autoimmune traits with predominantly gastrointestinal symptoms. Our cases highlight this entity; however, it is an uncommon manifestation of SLE. Abdominal CT with contrast is the diagnostic gold standard, while other serologic, endoscopic, or imaging studies have limitations. Timely initiation of glucocorticoids or other immunosuppressant management is crucial to control symptoms and avoid complications. It is important to maintain a high clinical suspicion for lupus enteritis as it can potentially be the initial or main manifestation of the disease.

Acknowledgements

Not applicable.

Statement on author contribution

All three authors contributed to data collection, research, and draft manuscript preparation. All authors reviewed and approved the final version of the manuscript.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethics approval

Our institution does not require ethical approval for reporting individual cases or case series.

Written informed consent

Written informed consent was signed by the patients included in this report.

Informed consent

Written informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

ORCID iD

Camilo Andrés Chaparro https://orcid.org/0000-0003-0119-5412

References

1. Janssens P, Arnaud L, Galicier L, et al. Lupus enteritis: from clinical findings to therapeutic management. *Orphanet J Rare Dis* 2013; 8(1): 1–10.
2. Isenberg DA, Rahman A, Allen E, et al. BILAG 2004. Development and initial validation of an updated version of the British Isles Lupus Assessment Group's disease activity index for patients with systemic lupus erythematosus. *Rheumatology* 2005; 44(7): 902–906.
3. Potera J, Palomera Tejeda E, Arora S, et al. Lupus enteritis: an uncommon presentation of lupus flare. *Cureus*, https://www.cureus.com/articles/69151-lupus-enteritis-an-uncommon-presentation-of-lupus-flare (2021, accessed 28 Jan 2024)
4. Brewer BN and Kamen DL. Gastrointestinal and hepatic disease in systemic lupus erythematosus. *Rheum Dis Clin N Am* 2018; 44(1): 165–75.
5. Tian XP. Gastrointestinal involvement in systemic lupus erythematosus: insight into pathogenesis, diagnosis and treatment. *World J Gastroenterol* 2010; 16(24): 2971.
6. Koo BS, Hong S, Kim YJ, et al. Lupus enteritis: clinical characteristics and predictive factors for recurrence. *Lupus* 2015; 24(6): 628–632.
7. Sran S, Sran M, Patel N, et al. Lupus enteritis as an initial presentation of systemic lupus erythematosus. *Case Rep Gastrointest Med* 2014; 2014: 1–3.
8. Barrera OM, Barrera MR, De La Rivera VM, et al. Enteritis lúpica como manifestación inicial de lupus eritematoso sistémico. Caso clínico. *Rev Médica Chile* 2017; 145(10): 1349–1352.
9. Chen L, He Q, Luo M, et al. Clinical features of lupus enteritis: a single-center retrospective study. *Orphanet J Rare Dis* 2021; 16(1): 396.
10. Lee HA, Shim HG, Seo YH, et al. Panenteritis as an initial presentation of systemic lupus erythematosus. *Korean J Gastroenterol* 2016; 67(2): 107.
11. Goh YP, Naidoo P and Ngian GS. Imaging of systemic lupus erythematosus. Part II: gastrointestinal, renal, and musculoskeletal manifestations. *Clin Radiol* 2013; 68(2): 192–202.
12. Frittoli RB, Vivaldo JF, Costallat LTL, et al. Gastrointestinal involvement in systemic lupus erythematosus: a systematic review. *J Transl Autoimmun* 2021; 4: 100106.
13. Conrad N, Misra S, Verbakel JY, et al. Incidence, prevalence, and co-occurrence of autoimmune disorders over time and by age, sex, and socioeconomic status: a population-based cohort study of 22 million individuals in the UK. *The Lancet* 2023; 401(10391): 1878–1890.