Telitacicept in combination with conventional therapy for rapid steroid reduction in lupus mesenteric vasculitis and lupus nephritis: a case report

Sirs,

Systemic lupus erythematosus (SLE), marked by multi-system inflammation, can lead to severe complications like lupus mesenteric vasculitis (LMV) and lupus nephritis (LN) (1). Despite conventional therapies, such as glucocorticoids (GC) combined with cyclophosphamide (CTX), being crucial treatment modalities, the mortality rate for LMV remains as high as 13.4% (2), and the complete remission rate for LN is only 20–30% (3). Telitacicept, as a novel biologic agent, holds great potential in the treatment of SLE. This case report presents the application effects of Telitacicept in conjunction with conventional therapies to achieve rapid disease control and corticosteroid tapering in a patient concurrently diagnosed with LMV and LN, offering novel strategies for clinical practice.

A 39-year-old female was diagnosed with SLE and Class V LN 10 years ago based on symptoms of facial rash, positive urinary protein, positive ANA, decreased complement C3 levels, and renal biopsy results. On September 12, 2024, she was admitted due to fever and abdominal pain for two days. Laboratory results showed white blood cell count of 15.87×10^9/L, C-reactive protein of 113 mg/L, alanine aminotransferase of 147 U/L, aspartate aminotransferase of 151U/L, gamma-glutamyl transferase of 80 U/L, ANA 1:100, positive anti-SSA, anti-SSB, anti-histone, and anti-mitochondrial M2 antibodies, albumin of 27 g/L, and 24-hour urine protein of 2069 mg. Enhanced abdominal CT revealed swelling in the ileocecal region; multiple areas of gas and fluid accumulation in the proximal small intestine, and increased mesenteric vascular images presenting a 'comb sign' (Fig. 1A). LMV and LN were diagnosed. She received methylprednisolone (MP, 240 mg/day for 3 days followed by 160 mg/day for 3 days) combined with intravenous immunoglobulin (20 g/day for 3 days), CTX (0.2 g every other day, then adjusted to 0.4 g every 2 weeks after a cumulative dose of 1 g), and other supportive treatments. However, her abdominal pain worsened, and abdominal CT showed increased lesions around the ileocecal region, new signs of small bowel obstruction, and significant ascites. Subsequently, Telitacicept (180 mg/week) was added, and MP was tapered (specifically: 80 mg/day for 5 days → 60 mg/day for 3 days → 40 mg/day for 7 days → 20 mg/day for 10 days → 16 mg/day thereafter, reducing by 2 mg every 2 weeks until reaching 8 mg/day maintenance). Her abdominal pain rapidly improved. One week later, a follow-up enhanced abdominal CT showed reduced bowel wall swelling, significantly less ascites, and no increased mesenteric vascular images (Fig. 1B). After four treatments with Telitacicept, 24-hour urine protein decreased to 193 mg, and Telitacicept was reduced to 80 mg/week. As of January 2025, she remains stable on MP 8 mg/day, Telitacicept 80 mg every 2 weeks, and cyclophosphamide 0.4 g every 2 weeks.

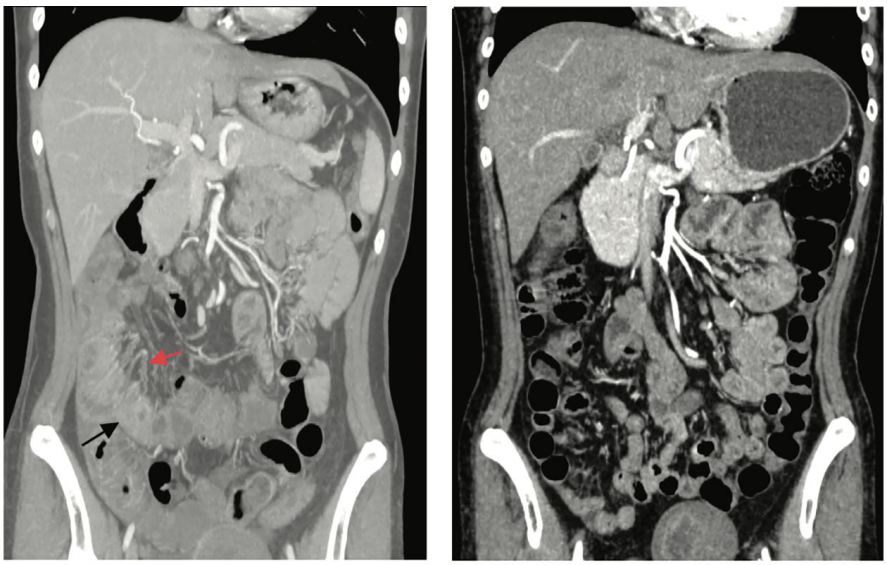

Fig. 1. Abdominal contrast-enhanced CT before and after treatment.
A: Before treatment, black arrows indicate swollen bowel walls, red arrow indicates increased mesenteric vascular shadows with a comb sign;
B. After treatment, no swollen bowel walls or vascular comb signs are observed.

SLE treatment primarily aims to achieve disease remission or lupus low disease activity status (LLDAS) as early as possible. However, traditional therapies have shown limited effectiveness, with only 18.8% and 69.7% of newly diagnosed patients achieving LLDAS in the first and second years of treatment, respectively (4). Telitacicept, acting as a dual BLyS/APRIL inhibitor, represents an innovative recombinant fusion protein that effectively suppresses B-cell-mediated autoimmune responses (5). Clinical data indicates that Telitacicept demonstrates rapid efficacy and significantly improves disease control in SLE. After receiving Tairucib therapy, the Systemic Lupus Erythematosus Responder Index 4 (SRI-4) response rates at weeks 4, 12, 24, and 52 were 22.22%, 54.17%, 72.22%, and 80.95%, respectively. The proportion of patients achieving LLDAS was 8.33%, 26.39%, 34.72%, and 47.62% at these same time points (6). Notably, Telitacicept can rapidly reduce urine protein levels, improve haematologic abnormalities, and assist in decreasing the dosage of glucocorticoids, all while demonstrating significant safety (7-9). Although there are no reported cases of Telitacicept treating LMV, based on its effects in LN, we added Telitacicept to the regimen for patients whose conventional treatment had failed, leading to rapid control of LMV. Moreover, LN was also quickly controlled four weeks after starting Telitacicept treatment. Additionally, inspired by the rituximab plus GC therapy for ANCA-associated vasculitis, where GC can be rapidly tapered to prednisone 0.5 mg/kg/day following pulse GC treatment (10). We attempted this rapid GC tapering for the first time in SLE and succeeded. This case highlights the potential of Telitacicept combined with conventional treatments for refractory SLE patients, especially offering new strategies for severe SLE cases, including attempting rapid glucocorticoid tapering under the support of biologics to improve long-term prognosis and quality of life. While more clinical data is needed, this report has laid the foundation for future research. In summary, Tairucib not only enhances the efficacy of SLE treatment but may also alter existing treatment paradigms, proposing new ideas in glucocorticoid management.

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