There was no mortality and no body weight loss in TAK-779-cell infiltration and pannus formation in synovial tissue (Fig. 1B). Control rats (PBS) show that TAK-779 inhibited mononuclear analysis of the ankle joint in rats treated with TAK-779 at 1 mg/kg/day, rats treated with TAK-779 at 2 mg/kg/day and control rats (PBS) show that TAK-779 inhibited mononuclear cell infiltration and pannus formation in synovial tissue (Fig. 1B). Histology of a normal rat joint at this age is also shown in Fig. 1B. There was no mortality and no body weight loss in TAK-779-treated rats. These data suggest that TAK-779 has anti-arthritis effects in vivo.

These results further support the evidence shown by others that CCR5 plays an important role in the development of arthritis in animal models of human RA. Taken together, the results show that therapy with CCR5 antagonists may serve as a new strategy for the treatment of RA.

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Letters to the Editor

Sir, Neuropsychiatric syndromes of systemic lupus erythematosus (NPSLE) is one of the major causes of morbidity and mortality in patients with systemic lupus erythematosus (SLE). NPSLE has been reported to occur in 14–75% of SLE patients and symptoms are extremely diverse, including seizures, stroke, depression and psychosis [1, 2]. Due to the multiple pathogenic mechanisms that evoke the diverse clinical manifestations of NPSLE, no single test is available for diagnosing this disease. Some reports have shown cytokines such as interleukin-6 (IL-6), IL-8 and IFNα to be elevated in cerebrospinal fluid (CSF) from patients with NPSLE [3, 4]. Interferon-inducible protein 10 (IP-10)/CXCL10 and monocytic chemotactic protein 1 (MCP-1)/CCL2 are high-affinity ligands for the chemokine receptors CXCR3 and CCR2, respectively. To find a useful diagnostic marker of NPSLE, we measured the concentrations of IP-10/CXCL10 and MCP-1/CCL2 in CSF from NPSLE and non-NPSLE patients. A total of 202 SLE patients fulfilling the criteria defined by the American College of Rheumatology was chosen for this study. The patients (183 females and 19 males, aged 16–62 yr; average 34.7 yr) were admitted to either Tokyo Women's Medical University or Jichi Medical School from 1992 to 2002. NPSLE was diagnosed under the American College of Rheumatology criteria for neuropsychiatric lupus syndromes [2]. Patients were divided into two groups: 101 patients were SLE patients with CNS symptoms (NPSLE) and 101 patients were SLE patients without CNS symptoms (non-NPSLE). All procedures involving patients were performed with Institutional Review Board approval and informed patient consent was obtained for this study. CSF was collected from these patients and IP-10/CXCL10 and MCP-1/CCL2 concentrations were evaluated by enzyme-linked immunoassay (ELISA) using the Quantikine human IP-10 immunosorbent assay and Quantikine human MCP-1 immunoassay (R&D Systems, Minneapolis, MN, USA), respectively. These NPSLE patients had active NPSLE manifestations when we obtained CSF samples (the patients were treated with systemic corticosteroid alone), and we did not include samples obtained after extensive treatment, such as corticosteroid pulse and/or cyclophosphamide pulse therapy. The average concentration of MCP-1/CCL2 was 1757.68 ± 1315.09 pg/ml in NPSLE patients and 667.46 ± 1349.05 pg/ml in non-NPSLE patients (Fig. 1A). While the average concentration of IP-10/CXCL10 was 3748.78 ± 15543.68 pg/ml in NPSLE patients and 483.82 ± 1433.67 pg/ml in non-NPSLE patients (Fig. 1B).

Statistical analyses using the Mann–Whitney U-test revealed that the IP-10/CXCL10 and MCP-1/CCL2 concentrations in the NPSLE group were significantly higher than those in the non-NPSLE group (P = 0.0000137 and P = 0.0000150, respectively). Interestingly, the IP-10/MCP-1 ratio in the NPSLE group was significantly higher than that in the non-NPSLE group (P = 0.0000014, Mann–Whitney U-test) (Fig. 1C). The

The discriminative abilities of (area under the curve) of the chemokines were 0.6311 [95% confidence interval (95% CI) 0.222–0.4064–0.7787.1975] for IP-10/CXCL10, 0.67626 (95% CI 0.418.6142–1.761.8262) for MCP-1/CCL2 and 0.82672 (95% CI 1.222729–5.011448) for the IP-10/MCP-1 ratio. There were no correlations between the level of MCP-1 in CSF and that in serum ($r = -1.332$, $P = 0.2481$) and the level of IP-10 in CSF and that in serum ($r = -1.445$, $P = 0.3842$). There were no correlations between the level of MCP-1 and that of IL-6 ($r = -0.1229$, $P = 0.462$), IL-8 ($r = -0.1585$, $P = 0.349$) or IFN-α ($r = -0.0818$, $P = 0.179$), or between the level of IP-10 and that of IL-6 ($r = -0.1435$, $P = 0.384$), IL-8 ($r = -0.1553$, $P = 0.332$) or IFN-α ($r = -0.1021$, $P = 0.213$).

The receptor of IP-10/CXCL10, CXCR3, is predominantly expressed on activated T cells and natural killer cells. On the other hand, the receptor of MCP-1/CCL2, CCR2, is expressed not only on activated T cells and natural killer cells but also on monocytes, basophils and dendritic cells. These results implicate the differential contributions of both CXCR3 and CCR2 signalling in the pathogenesis of NPSLE. We conclude that CSF IP-10/MCP-1 ratios are higher in NPSLE patients than in non-NPSLE patients and that this index is a useful diagnostic marker of NPSLE.

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Role of secondary hyperparathyroidism in spontaneous rupture of the quadriceps tendon complicating chronic renal failure

Sir, Ruptures of the extensor mechanism are relatively rare injuries. Unilateral rupture is more common, especially in older individuals. Thus, simultaneous and spontaneous rupture is a very rare condition and only a few cases have been reported in the literature to date. We would like to report a new case of spontaneous bilateral rupture of the quadriceps tendon in a patient with chronic renal disease, illustrating the deleterious role of secondary hyperparathyroidism.

A 31-yr-old man was admitted to our department for acute onset of knee pain and inability to extend the knee, which occurred...