Treatment of Kimura disease with mycophenolate mofetil monotherapy

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INTRODUCTION
Kimura disease (KD) is a rare idiopathic condition that presents as solitary or multiple painless subcutaneous masses in the head and neck region. It may also involve extracutaneous sites, such as regional lymph nodes, major salivary glands, and the kidneys. Most cases reported occurred in Asian men between 20 and 30 years of age. Treatment is often sought for symptomatic relief and cosmetic concerns. Therapeutic modalities for KD include surgical excision, radiotherapy, and various immunomodulating agents, such as oral corticosteroids, cyclosporine, and leflunomide. Most cases have favorable initial responses to treatment, but relapse occurs at rates as high as 60% to 100%. We report a case of KD with sustained response to mycophenolate mofetil (MMF) monotherapy.

CASE REPORT
A 32-year-old Chinese man presented for a 1-year history of a pruritic, enlarging nodule on the right cheek. Physical examination found an ill-defined, erythematous, nontender nodule measuring 6 × 5 cm on the right malar cheek and a smaller 1.5- × 3-cm plaque on the right medial cheek (Fig 1, A). Computed tomography scan and magnetic resonance imaging of the head and neck found extension to the subcutaneous fat without skeletal muscle, bony, or lymph node involvement. Histopathologic examination found nodular lymphocytic aggregates characterized by centrally located germinal centers (positive for CD10 and Bcl-6) surrounded by small lymphocytes in the reticular dermis and subcutaneous fat. There were numerous blood vessels and many admixed eosinophils within the zones of nodular lymphocytic infiltrate (Fig 2). No significant fibrosis was noted. No lymphoid atypia was identified, and a polyclonal pattern was confirmed by gene rearrangement analysis. Tissue culture was negative. A diagnosis of Kimura’s disease was rendered. Laboratory analyses found an elevated IgE at 315 IU/mL, normal IgG4 19 mg/dL, and a mildly elevated peripheral eosinophil percentage (5.9%). The absolute eosinophil count was within normal range. Mild thrombocytopenia (platelet count, 115,000/µL) was noted on initial workup, but platelet count normalized to 145,000/µL, and no further workup was pursued. The patient’s renal function was within normal limits, and there was no significant proteinuria (108.9 mg/24 hours) on timed urine studies.

Our patient began taking MMF, 1000 mg twice daily, and topical timolol solution. He discontinued topical timolol after 2 weeks. Clinical response was seen within 1 month of treatment (Fig 1, B). His treatment course was complicated by mild neutropenia at 4 months (absolute neutrophil count, 1,600/µL), which resolved shortly after dosage adjustment of MMF to 1000 mg daily. The patient continued to have sustained response with MMF, 1000 mg daily at 23 months of follow-up (Fig 1, B). His peripheral eosinophilia was noted to persist (9.6%; absolute number, 500/µL) at 23 months.
KD is a chronic inflammatory disease that manifests as a triad of subcutaneous nodules in the head and neck region, peripheral blood eosinophilia, and elevated serum IgE. Renal involvement is not uncommon and most frequently results in nephrotic syndrome.\(^1\) The pathogenesis remains unknown, but allergy, atopy, autoimmunity, and parasite infestation are considered possible risk factors.\(^4-6\) Previous studies have found increased levels of interleukin-4, interleukin-5, and interleukin-13 in the peripheral blood of affected individuals, suggesting a role for T-helper 2 cytokines.\(^8\)

KD is often compared with angiolymphoid hyperplasia with eosinophilia (ALHE) because of several overlapping clinical and histologic features. The question of whether KD and ALHE represent 2 ends of 1 disease spectrum or 2 separate entities remains controversial. The current understanding is that they are distinct processes. KD represents a lymphoproliferative condition, whereas ALHE is a neoplastic disorder of vascular endothelial cells with a secondary inflammatory component.\(^2\) KD most frequently affects young Asian men, whereas ALHE tends to develop in middle-age women. Lesions can be differentiated clinically, as KD lesions are deep

**DISCUSSION**

**Fig 1.** Kimura disease. A, Ill-defined, erythematous deep nodule and plaque on the right malar and medial cheek. B, Significant reduction in size and erythema at 1 month of mycophenolate mofetil, 1000 mg twice daily (left). Continued clinical response at 23 months with mycophenolate mofetil at 1000 mg daily (right).

**Fig 2.** Histopathologic features of KD. A, Low-power examination shows a striking nodular lymphocytic infiltrate involving the reticular dermis and subcutaneous fat. No significant fibrosis was noted. B, Higher-power magnification shows the basic composition of this infiltrative process being one of reactive germinal centers surrounded by small mature lymphocytes and eosinophils accompanied by numerous small-caliber vessels defining a form of angiomatous pseudolymphoma. (A and B, Hematoxylin-eosin stain; original magnifications: A, \(\times 20\); B, \(\times 400\).)