Immunoglobulin G4-Related Disease (IgG4-RD) Presenting As Multiple Myeloma

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INTRODUCTION

IgG4-RD is a rare syndrome with various presentations including serum eosinophilia, elevated serum IgG4, organs swelling and lymphadenopathy.

Organ typically affected includes, pancreas, kidney, lymph node and skin.

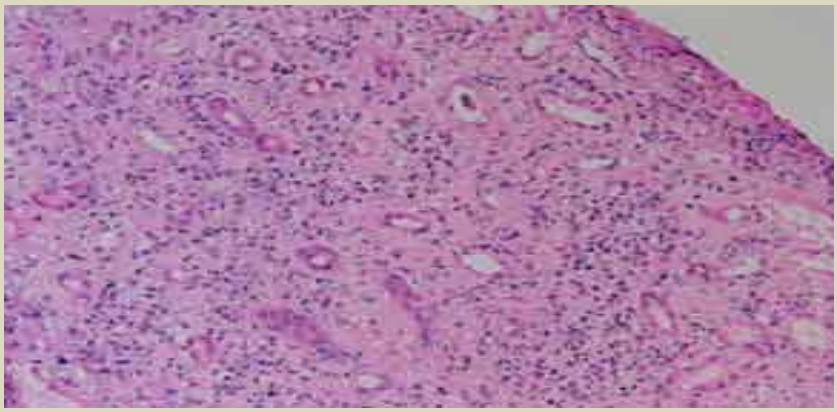

Fig.1-lymphoplasmacytic infiltrate of kidney, with a moderate number of eosinophils

CASE PRESENTATION

A 71-year-old female with a history of sjogren's syndrome presents with fatigue, lethargy and back pain. Examination reveals diffuse lymphadenopathy. A left axillary lymph node biopsy shows clonal plasma cells with kappa light chains. The bone marrow biopsy shows normocellular marrow for the age with maturing trilineage hematopoiesis and kappa restricted plasma cell neoplasm.

She is started on bortezomib (proteasome inhibitor), cyclophosphamide and dexamethasone for 6 weeks for presumed multiple myeloma.

A review of her bone marrow and lymph node biopsies reveals few plasma cells and many CD138+ immunoblasts and 50% IgG4 cells, consistent with IgG4-RD. Cytotoxic therapy is discontinued and she is started on tapering doses of prednisone. Her latest serum IgG4 is 276 (2.4-121.0 mg/dl).

Results

The etiology of IgG4-RD is unknown and requires a tissue biopsy typically showing extensive lymphocyte and plasma cell infiltrations, IgG4 immunoblasts, storiform fibrosis (fibrosis in a cartwheel distribution), eosinophil tissue infiltration and obliterative phlebitis. Elevated serum IgG4 levels or eosinophilia may be present.

Treatment with systemic glucocorticosteroids is recommended in all symptomatic and asymptomatic cases involving kidney or pancreas.

CONCLUSION

IgG4-RD is an immune-mediated condition that may affect multiple organs. Allergists/Immunologists should include IgG4-RD in differential diagnosis of subjects with angioedema, blood or tissue eosinophilia, elevated serum IgG4 levels and lymphadenopathy.

REFERENCE

•1.Stone JH, Zen Y, Deshpande V. IgG4-related disease. N Engl J Med 2012; 366:539.

•2.Kamisawa T, Zen Y, Pillai S, Stone JH. IgG4-related disease. Lancet 2015; 385:1460.

•3.Deshpande V, Zen Y, Chan JK, et al. Consensus statement on the pathology of IgG4-related disease. Mod Pathol 2012; 25:1181.

•4. Zen Y, Nakanuma Y. Pathogenesis of IgG4-related disease. Curr Opin Rheumatol 2011; 23:114.

•5. Brito-Zerón P, Ramos-Casals M, Bosch X, Stone JH. The clinical spectrum of IgG4-related disease. Autoimmun Rev 2014; 13:1203.

•6. Della-Torre E, Lanzillotta M, Doglioni C. Immunology of IgG4-related disease. Clin Exp Immunol 2015; 181:191.

•7. mehara H, Okazaki K, Masaki Y, et al. A novel clinical entity, IgG4-related disease (IgG4RD): general concept and details. Mod Rheumatol 2012; 22:1.