THE KOREAN SOCIETY OF NEPHROLOGY
APCN & KSN 2024
June 13(Thu) - 16(Sun), 2024 Coex, Seoul, Korea
Promoting Sustainable Kidney Health: The Asia-Pacific and Beyond

## Abstract Submission No.: A-0267

# IgG4 related tubulointerstitial nephritis in a renal failure patient with hypereosinophilia: A case report

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**Case Study :** IgG4-related disease (IgG4-RD) is a systemic fibroinflammatory condition characterized by the infiltration of affected organs by IgG4-positive plasma cells. It can affect various organs, with tubulointerstitial nephritis (TIN) being the most common manifestation of IgG4-RD renal involvement. A 64-year-old man was hospitalized for the evaluation of loss of appetite and mild abdominal pain. Over the past 3 months, he experienced a weight loss of 5 kg, accompanied by skin itching. He presented with renal failure(Urea 27.1 mg/dl, creatinine 2.22 mg/dl) and proteinuria, microscopic hematuria, hypereosinophilia (WBC Total count 11400/mm, eosinophils 58.8%; eosinophils count 6703 /mm) and low complement levels. Albumin/Globulin Ratio was inversed. Serum levels of IgG and IgG4 were increased. Imaging examination showed no involvement of other organs and no retroperitoneal fibrosis. A kidney biopsy was performed to determine the cause of glomerulonephritis, revealing chronic interstitial nephritis.- Fibrosis with storiform and/or birds eye pattern(figure 1, PAM)- IgG4/IgG : 0.4 (figure 2, Immunohistochemistry stain) IgG4-TIN was diagnosed through biopsy, and administration of prednisolone 15 mg twice daily (bid) was initiated. On the 7th day, symptoms improved, and creatinine decreased from 2.5 to 1.32 mg/dl. The patient was discharged, and steroids were gradually reduced to 10 mg/day after discharge. The major features observed in the IgG4-TIN kidney biopsy included marked infiltration of lymphoplasmacytoid cells, a ratio of IgG4-positive plasma cells to IgG-positive cells exceeding 40%, and characteristic fibrosis known as striform fibrosis or bird's eye pattern. Early diagnosis of IgG4-TIN is crucial, as it allows for prompt steroid treatment, preventing structural damage to the kidney and emphasizing the importance of early intervention. IgG4-RD is a systemic inflammatory disease with the potential to affect various organs. This case underscores the significance of considering IgG4-TIN in the process of differential diagnosis.

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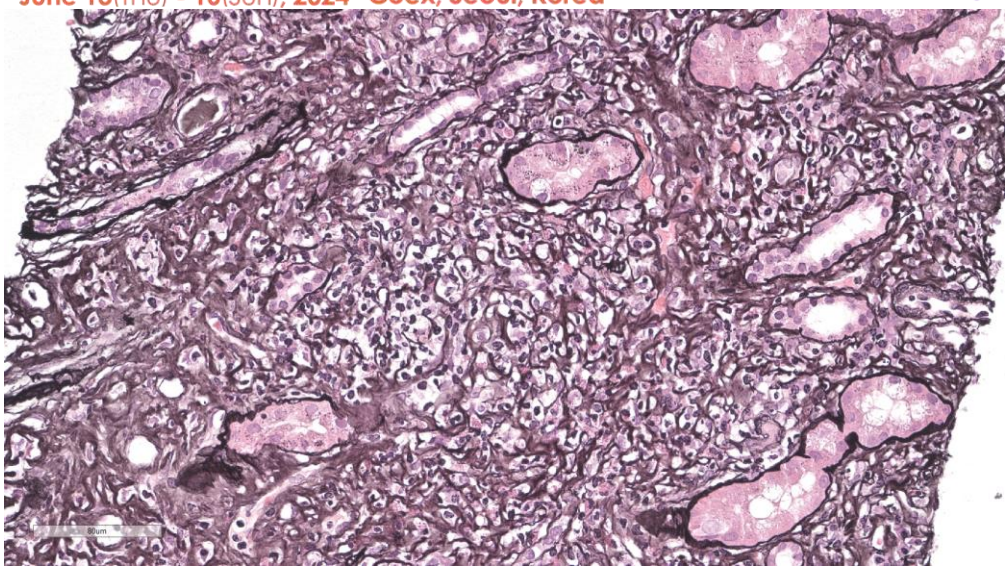

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