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A 23-year-old man with Kidney sarcoidosis

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Case Study : A 23-year-old male (67kg, 175cm) patient first visited FCHM in April 2022 due to high blood pressure and edema that hadn't subsided since February 2022. After further testing, he was diagnosed with chronic glomerulonephritis. He also had headaches, fever (38 °C), weakness, and a lack of appetite, and his urine output has decreased to 400 ml per day since April 2022. The highest systolic pressure reaches 210 mm. Hg. The diagnosis was confirmed by a kidney biopsy related to heavy proteinuria and severe damage to kidney dysfunction. He has no history of tuberculosis before. His skin color is white with no lesion, lymph nodes are normal in size, bilateral lower limb swelling is present, and his BP is 170/110 mm. Hg, HR-88, RR-18, BT-37.6°C. Ultrasound: Right kidney 11.1*5.2*1.6cm, left kidney 10.8*5.1*1.6cm, increased echogenicity, no lesions observed. Liver-0.7cm multiple calcifications. In his chest X-ray, and CT no abnormalities were observed. Kidney biopsy/LM: 2 cores with 9 glomeruli, Globally sclerotic glomeruli 4/9. 5/9 glomeruli have diffuse mild, focal moderate to severe mesangial matrix expansion. Mild mesangial cell proliferation, estimating up to 5-6 cells. The most glomerular GBM –diffuse thickening. There is diffuse moderate tubular atrophy in the sclerotic area. Diffuse severe interstitial inflammation contained lymphocyte infiltration. Several non-caseating granulomas in interstitium with multinucleated giant cells, epitheloid, and spindle cell components. (Picture 1). There is diffuse mild, focal severe interstitial fibrosis. Diagnosis: Kidney sarcoidosis Differential diagnosis: Liver sarcoidosis, Kidney TB, Atypical mycobacteriosis Renal involvement in sarcoidosis is rare and very rarely severe. It was diagnosed for the first time in the total kidney biopsies performed between 2017 and 2023 in Mongolia. In this case, interstitial inflammation and kidney dysfunction were co-occurring, and treatment (glucocorticosteroid 0.5 mg/kg/day and ARB) was started promptly to prevent kidney failure.

Table 1.png

Laboratory	Result	Reference
WBC	8.05	4.0-9.0^10⁹
HGB	11.5	11.5-16.5 g/dl
PLT	212	160-400^10⁹
Total protein	56.9	66.0-87.0 g/l
Albumin	28.1	35.0-52.0 g/l
Cholesterol	4.8	0-5.2 mmol/l
Creatinine	4.04	0.5-1.2 mg/dl
BUN	96.4	16.6-48.5 mg/dl
Calcium	1.46	2.15-2.55 mmol/l
Vitamin D	77	30-50 ng/ml
Cystatin C	2.31	0.5-1.2 mg/l
PTH	493	10-55 pg/ml
c ANCA	Negative	-
p ANCA	Negative	-
Urine test	RBC 3+ /dysmorphic-310/ PRO >3g/l	-
TPUC	8.73	0-0.15 g/day
Urine TB/GenXpert test	Negative	-

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