中文題目：Antiphospholipid nephropathy 合併中風的非典型表現
英文題目：Atypical Presentation of Antiphospholipid Nephropathy Complicated with Young Stroke

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Case Report

This 41-year-old male, working as a technologist, without chronic illness, was admitted due to progressive proteinuria and body weight loss in recent two years.

Review history, his life was uneventful until 2 years ago, where proteinuria (3.5g/day) and hematuria 2+ was noted during health examination. He recalled persistent bubbled urine for about 5 years. He did not take it seriously until recent one year, where progressive weight loss (from 66 to 56kg) was noted, which worsened in recent one month (3-4kgs/month). Due to progressive weight loss, he came to outpatient clinic for further work up. Patient denied night sweating, no recent upper respiratory tract symptoms, and there was no change of bowel habit recently. Besides, there is no known family history of malignancy.

Patient was a chronic smoker, until recent one month, he stopped due to persistent proteinuria. He also never went for exercise. For persistent proteinuria, he ever went for chinese medication about one month ago, but stopped after taking one prescription. Other than that, he did not take any herbal medication or unknown injection. He also denied previous edema episode, no hypoalbuminemia (albumin 3.47mg/dL), but was told about dyslipidemia (LDL 128mg/dL) since years ago. However, he did not take medication due to general discomfort after taking medicine. Thyroid function and autoimmune panel was surveyed in OPD, but there was no specific finding.

The first admission was arranged for renal biopsy. Patient tolerated well with the procedure and he was discharged uneventfully. Renal biopsy showed non-sclerotic glomeruli with normocellularity, normal capillary walls and patent capillary lumina. No segmental sclerosis is seen. Pathological diagnosis was focal segmental glomerulosclerosis. Electron microscope revealed extensive foot processes effacement of podocytes, affecting more than 80% of the capillary.

Unfortunately, sudden onset slurred speech and right side weakness developed one

week after discharged. Brain magnetic resonance imaging revealed acute infarction of left temporal lobe. Throrough evaluation was performed due to young stroke. Homocysteine, Protein C, Protein S and antithrombin III was within normal range. Lupus coagulant, anticardiolipin (IgG 133.3GPL; IgM 45.1MPL), anti-β2-glycoprotein (143.4units) showed high titer. Anti-dsDNA and ANA were negative. Primary antiphospholipid syndrome was highly suspected. Anticoagulant was prescribed and symptoms improved. Repeat antiphospholipid antibodies showed persistent high titer. Hydroxychloroquine and steroid were prescribed and patient was regularly followed up at rheumatology and nephrology outpatient. During treatment, proteinuria improved from 3.5g/day to 0.7g/day.

Discussion

Antiphospholipid syndrome (APS) is an autoimmune disease defined by the presence of arterial or venous thrombotic events and/or pregnancy morbidity in patients who tests positive for antiphospholipid antibodies. The risk of a first thrombotic event among asymptomatic persons who are positive for lupus anticoagulant, anti-cardiolipin antibodies and anti-β2-glycoprotein antibodies (triple-positive patients) is 5.3% per year.(1) Patients with circulating antiphospholipid antibodies (aPL) can be asymptomatic. It is believed that the prothrombotic state could be induced by other prothrombotic states, such as cellular effects, increases in the expression of plasma coagulation regulatory proteins and fibrinolysis. The exact mechanism of thrombosis in APS is not well understood, but resistance to natural anti-coagulants such as Protein C, impaired fibrinolysis, activation of endothelial cells to pro-coagulant phenotype and activation of platelets are implicated.(2) Kidneys are one of the major target affected organs, occurs at any level of vasculature including renal arteries, intrarenal arteries, glomerular capillaries and renal veins.(3) Differs from lupus nephritis, aPL-associated vascular lesions have an ominous effect on long term renal function, arterial hypertension, and absence of response to immunosuppressive agents.(4)

APS nephropathy had been well established, clinically characterized by a syndrome of vascular nephropathy associated with hypertension, acute or chronic renal insufficiency, proteinuria and hematuria.(3) Acute APS nephropathy usually presented with thrombotic microangiopathy, histologically, focal or diffuse microangiopathic changes affecting the whole intrarenal vascular tree and the glomerular tufts were observed.(5) Meanwhile, atherosclerosis is typically seen associated with intimal fibrous hyperplasia, thickening of arteries due to fibrosis, and proliferation of myofibroblastic cells, with the consequent lumen restriction and

ischemia, which is rarely seen in other nephropathies, making it very suggestive of APS nephropathy.(4)

In this patient, there were no specific findings of APS nephropathy, neither thrombotic microangiopathy nor intimal fibrous hyperplasia were seen. However, focal segmental glomerulosclerosis were found. Studies showed membranous nephropathy was the most common glomerular disease in APS nephropathy, followed by minimal change disease and pauci-immune glomerulonephritis.(6) Focal segmental glomerulosclerosis has not been well documented as presentation of antiphospholipid syndrome. The presence of a circulating factor that results in podocyte effacement and disruption of the glomerular filtration barrier has been suggested for decades. Yet, specific mechanism of action of this permeability factor remained elusive. Specific undetected antibody in APS could be one of the contributing factors to podocytes effacement. Drastic improvement of proteinuria with anticoagulation treatment for cerebrovascular event might be a hint that, this episode of focal segmental glomerulosclerosis was related to APS. Further studies on pathogenesis of APS nephropathy are indicated owing to the wide range of clinical presentation of APS nephropathy. Early recognition and early treatment might prevent further thrombotic events and improved survival.

Reference

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