

A case report of concurrent thin basement membrane disease and nutcracker syndrome

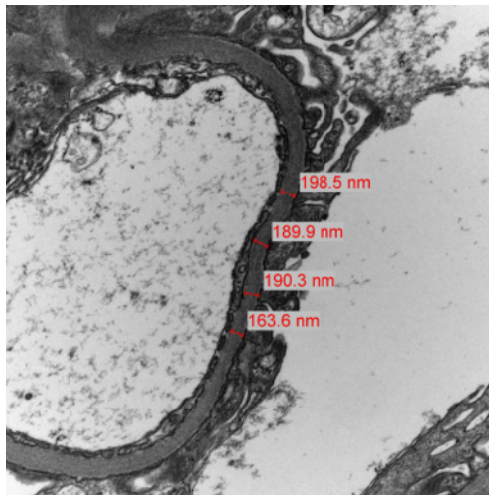
서울아산병원 내과

박현진, 백충희

Introduction: Thin basement membrane disease is defined as diffuse thinning of the glomerular basement membrane, and is clinically characterized by benign recurrent hematuria and minimal proteinuria. It often occurs together with other glomerular diseases. Nutcracker syndrome is a renal vein entrapment syndrome between abdominal aorta and superior mesenteric artery. Compression of the left renal vein can cause blood to flow backward into other nearby veins and make them swell. We report a case with concurrent thin basement membrane disease and nutcracker syndrome.

Case report: A 23-year old female with no past medical history visited a tertiary medical center with gross hematuria which started 1 year ago. At that time, dysuria, urgency, frequency with orange hematuria coexisted and even after taking 2 weeks of antibiotics, hematuria continued for a year. On the initial examination, she was underweight with BMI 17, and the only symptom was gross hematuria. Serologic and hematologic evaluation (ANCA, ANA, Anti-GBM Ab, C3/C4/CH50, ASO Ab, cryoglobulin and protein electrophoresis) were negative. Kidney biopsy showed thin basement membrane syndrome (Figure 1). In cystoscopy, left lateralizing hematuria was found. Retrograde pyelography and cytology were negative. CT urography showed suspicious minimal narrowing of the left renal vein between SMA and aorta which means that nutcracker syndrome cannot be excluded (Figure 2). Additionally, venography showed no collateral vein or reflux and the pressure gradient was 2mmHg, higher than normal range. On doppler ultrasonography of left renal vein, the ratio of the diameter and velocity of renal hilar to aortomesenteric portion is 4.19 and 9.125 respectively, which also favors nutcracker syndrome. She was diagnosed as thin basement membrane disease superimposed on nutcracker syndrome. Now she is trying to gain more weight.

Conclusion: This report describes a rare case of concurrent thin basement membrane disease and nutcracker syndrome. Usually symptoms appear as microscopic hematuria in thin basement membrane syndrome alone, but superimposed on nutcracker syndrome, frank hematuria continued.



<Figure 1.>



<Figure 2.>