

난치성 신증후군 환자에서 양측성 신동맥 색전술을 통한 성공적인 단백뇨의 조절 1예

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Successful Control of Heavy Proteinuria after Bilateral Renal Artery Embolization in a Patient with Refractory Nephrotic Syndrome

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Introduction: Chronic massive proteinuria in patients with refractory nephrotic syndrome can lead to malnutrition and cardiovascular death. Because surgical nephrectomy showed high risk in patients with chronic massive proteinuria in refractory nephrotic syndrome, renal artery embolization can be performed more safely. In general, as renal function decreased to end stage, there is reduced proteinuria. We report a case that bilateral renal artery embolization was performed for control of chronic massive proteinuria in a patient with refractory nephrotic syndrome and end stage renal disease.

Case: 52 years old man presented to our hospital with dyspnea on exertion and generalized edema. In June 2007, he was diagnosed as focal segmental glomerular sclerosis. Laboratory data showed 24 hour urine protein 10 g/d, blood urea nitrogen 22 mg/dL, creatinine 1.0 mg/dL, cholesterol 474 mg/dL, albumin 2.2 g/dL. Prednisolone, mycophenolate sodium, Rituximab, irbesartan, furosemide, metolazone, and spironolactone were prescribed. However, he has shown persistent proteinuria of nephritic range (14 g/d) and deterioration of renal function. In physical examination, he showed generalized edema. Laboratory data showed leukocyte count 9,310/mm³, Hb 6.6 g/dL, and platelet count 267,000/mm³. His chemistry were total protein 3.3 g/dL, albumin 1.2 g/dL, cholesterol 191 mg/dL, blood urea nitrogen 50 mg/dL, creatinine 3.5 mg/dL, sodium 135 mEq/L, potassium 4.3 mEq/L and chloride 110 mEq/L. Urine protein was 14.45 g/day. Chest X-ray showed both pleural effusion. Second day on admission, he received arterio-venous fistula on his left forearm. Urine output was 400-500 cc with furosemide intravenously and he tolerated for dyspnea or uremic symptom. 72th day on admission, hemodialysis was begun on regular basis due to dyspnea and uremic symptom (anorexia, nausea). 75th day on admission, he received bilateral amplatzer vascular plug embolization of the both main renal arteries. After embolization, he suffered from only mild flank pain. 94th day on admission, he didn't complain of dyspnea and uremic symptom. Blood chemistry showed albumin 2.6 g/dL, cholesterol 100 mg/dL. Total 24 hours urine output was 50 ml/day. He discharged with regular hemodialysis 3 times per week.

Key Words: 신증후군, 단백뇨, 신동맥 색전술

Nephrotic syndrome, Proteinuria, Renal artery embolization