

NEPHROPATHY CAUSED BY CHINESE HERBS IN IRAN

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In 1991, several women were reported with acute, mostly near end-stage renal disease following exposure to Chinese herbs at a weight reduction clinic in Belgium.¹ This disorder is called Chinese herbs nephropathy (CHN). The major lesion is extensive interstitial fibrosis with tubular atrophy.² However, the risk of transitional cell carcinoma of the genitourinary tract will rise.³ We herein report a case of a young girl with ARF following Chinese herb consumption.

A 16-year old girl was admitted to our hospital on May 3, 2000. She complained of exertional dyspnea, dizziness, weakness, and lower limb edema. She had a history of Chinese herb intake, called Mongolian lac in the market, for one month due to a slimming regimen before admission. She had not consumed any other drugs. In initial physical examination, we found pallor of conjunctiva, lower limb edema and pulmonary edema that did not respond to routine treatment. Blood pressure, heart rate, respiratory rate, and body temperature were 160/90 mmHg, 100/min, 16/min, and 37°C, respectively. Serum creatinine, BUN and potassium were 18.5 mg/dL, 168 mg/dL, and 6.3 mEq/L, respectively. Hemoglobin concentration was 7.6 g/dL and platelet count was 157000/dL. She underwent hemodialysis and her respiratory function relatively improved.

Other laboratory results such as liver function tests, coagulation tests, and serum complement levels were normal. Anti-nuclear antibodies (ANA), Anti-double stranded DNA (anti-ds DNA), HBsAg, and ASOT were also negative.

She had developed metabolic acidosis. Serum calcium and phosphate concentration were 7.3 mg/dL and 8.9 mg/dL, respectively. There was +2 proteinuria, 3-5 RBC, and 3-5 WBC and granular casts (per hpf) in the urine sediment. The value of urine protein excretion was 440 mg per day. Ultrasound revealed normal sized kidneys. We started pulse therapy with methylprednisolone and cyclophosphamide on the first day. Also one unit of packed cells was transfused. Because of thrombocytopenia, renal biopsy could not be done and treatment was continued with 60 mg/day prednisolone. Unfortunately, there was no satisfactory response to therapy and she has been on hemodialysis until now.

Women appear to be at a greater risk of affection to CHN than men.¹ Patients typically present with acute renal insufficiency and other findings of tubulointerstitial disease. The blood pressure is either normal or only mildly elevated. Protein excretion is only moderately increased (usually less than 1.5 g/day), and the urine sediment reveals only a few

red and white cells. The increase in protein excretion consists of both albumin and low molecular weight proteins.⁴ CHN is characterized by a lower proteinuria, more severe anemia, and a faster progression to renal failure than other interstitial nephropathies.⁵ Despite discontinuation of the herbal drugs, progressive renal failure is common.⁶ The pathogenesis of CHN has not been completely defined yet. Aristolochic acid, a known nephrotoxic and carcinogen agent, was suspected as its casual factor.^{7,8} The possible association of CHN with carcinogenesis may be due to mutation in P53, a known tumor suppressor gene.³

The first report of CHN was from Belgium but the use of Chinese herbal remedies is also increasing in other countries and nephropathy caused by Chinese herbs have been reported.⁹

Progression of renal failure in our patient was also fast and eventually ESRD developed. There is no proven effective therapy for this disorder. An uncontrolled study suggested that steroids decelerate the rate of renal function loss.¹⁰ Despite three months of steroid therapy in our patient, there was no change in the clinical and paraclinical course of disease. Renal transplantation is an effective modality for patients who progress to end stage renal disease.⁵

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