Clinical Report 2 (Japan)

Astragali Radix Provides a Decline in Serum Creatinine in Chronic Renal Failure

Hajime Haimoto

Case: 63 years, male employee

Diagnosis: #1: hypertension, #2: chronic glomerular nephritis, #3: chronic renal failure, #4: gout

Past history: regular health checks have shown proteinuria and positive tests for occult urinary blood since the patient was in his 20s.

Present illness: At the age of 40 hypertension, gout and chronic glomerular nephritis was pointed out during a regular health check and the patient was treated for hypertension.

In May 1998, at the age of 56, the patient consulted the clinic for the first time, requesting treatment for hypertension and gout. Height was 163 cm, weight 56.8 kg, blood pressure 145/93 (already under treatment with hypotensives), pulse rate 67 bpm (no arrhythmia).

Findings obtained during the first examination included Cr 1.7 mg/dl, BUN 25.8 mg/dl, total protein 7.2 g/dl, albumin 4.2 g/dl, total cholesterol 184 mg/dl, uric acid 10.0 mg/dl, Na 144 mEq/l, K 4.7 mEq/l, Cl 105 mEq/l, antinuclear antibodies (-), serum component titer and IgA levels were within the normal range. Urinary protein (++), occult blood (++). Proteinuria was 0.80 g ～ 1.56 g/day, 24-hour CCr 57.3 ml/min, ultrasound scans showed no postrenal lesions of the bladder or prostate. Electrocardiogram and chest x-ray were normal as well.

From the first consultation, calcium antagonists, β-blockers, ACE inhibitor, ARB antagonists and similar hypotensives as well as 100 mg of Zyloric (allupurinol) for the hyperuricacidemia were prescribed. This treatment controlled blood pressure at a level of 120～135/75～90 mmHg and uric acid at 8.2 mg/dl.

Yet, Cr increased gradually, so that the levels of Cr 2.0 and K 5.1 measured in October 2002 reached by February 1, 2004 values of 2.2 and 6.3 for Cr and K respectively. At this time, treatment was initiated with *Astragali* Radix.

Kampo examination: no fatigue, restlessness or insomnia, good appetite, becomes sleepy after meals, does not sweat, no dry mouth, neither overly sensitive to heat nor cold, no particular thoracic or abdominal symptoms, bowel movements: 2/day, micturition: 7/day and 3/night

Kampo medical physical findings:

Pulse: full, wiry, pulse rate 90 bpm.

Tongue: pale-red, dark, thick, moderate dental indentations, no patchy blood stasis, superficially moist, thin white fur

Abdomen: upper abdominal region generally hard, strong resistance in the hypochondrial and epigastric regions, no tenderness, no fluid accumulation in the stomach, tense rectus abdominis muscles.

Course:

Initiation of treatment with 30 g of *Astragali* Radix (alone) on February 1, 2003 (combined otherwise with 5 mg of Norvasc, 8 mg of Blopress and 100 mg of Zyloric).

March 10 of the same year: Cr 1.7 mg/dl, K 5.6 mEq/l, addition of 10 g of *Ziziphi* Fructus, in order to make the drug more palatable.

April 7 of the same year: Cr 1.6 mg/dl, K 5.6 mEq/l.

May 5 of the same year: Cr 1.6, K 5.4 mEq/l.

September 26 of the same year: Cr 1.7 mg/dl.

December 27 of the same year: Cr 1.5 mg/dl, K 6.8 mEq/l; because of an increase in the K concentration due to excessive intake of fruits the patient was instructed in how to maintain a low potassium diet.

February 2004: Cr 1.29 mg/dl, K 4.8 mEq/l.

August of the same year: Cr 1.40 mg/dl, K 6.1 mEq/l, repeated nutritional counseling due to another rise in potassium concentration.

October of the same year: Cr 1.57 mg/dl, K 5.2 mEq/l

Until June 2005 the Cr control was good, but from June 30 to July 21st the patient discontinued his medication over the period of a stay in Germany.

July 25 of the same year: an rise to Cr 2.78 mg/dl and K 6.3 mEq/l was observed immediately after the patient's return to Japan. The *Astragali* Radix dose after the 25th of that month was increased to 30 g and treatment with *Glycyrrhizae* Radix initiated. The shift from Taiso to Kanzo was made in order to decrease serum potassium concentration.

August 20 of the same year: concentration decreased to Cr 1.76 and K 4.1 mEq/l

Currently, September of the same year: combination of 30 g of Ogi and 10 g of Kanzo with the hypotensive Olmetec 10 mg, CR 20 mg of Adalat and 100 mg of Zyloric.

Conclusion

We reported previously about a Cr lowering effect in chronic renal failure J. Phyto (Vol.7 No.1). The summary of this report is that Ogi was observed to cause in 8 out of 9 patients during the early stage of chronic renal failure a fall in creatinine ($1.6 \leqq Cr < 3.0$) by an average of 21%, while in 2 patients with uremia a decrease of 8.1→6.9 and 5.9→1.6 respectively was observed. From that time to the present day we treated a total of 13 patients during the early stage of chronic renal failure with Ogi. Excluding two patients in whom the treatment was discontinued because of side effects, like eruptions, in all 11 patients a continuous Cr lowering effect was observed. Presently, the effect of the orally applied medication continues. In some patients, long-term control over a maximum duration of 2.5 years is permitted.

When the treatment with Ogi was for some reason discontinued in this kind of patient, Cr increased, but following a restart of the treatment with Ogi the creatinine fell again in 2 of the cases. In one patient, the Cr level fell after only one month by 2.78→1.76 (35%) and in the other, over a period of 3 months by Cr 1.88→1.43 (24%).

The creatinine clearance was observed in regular intervals in some of the above described 13 patients and showed an increase in 24-hour creatinine clearance occurring simultaneously with the fall in Cr level, suggesting that Ogi probably acts directly on glomerular function. Also, these cases showed that there seems to be no potassium depleting effect, so that diet appeared to have been more effective than Ogi. However, potassium depletion is generally known to be a side effect of licorice, suggesting that combination treatment with licorice might help in patients with chronic renal failure to achieve a decrease in potassium level.

Reduction of Cr levels in patients with chronic renal failure and thus the possibility to avoid or delay the necessity for dialysis had been the most important task and the discovery of relevant effects of a treatment of with Ogi alone. In the future, this should lead to new developments in this field.