The effect of Diao-Teng-San on blood pressure and narrowing of retinal arterioles in SHR and SHRSP. Murata M., Satou T. and Takahashi S. Department of Ophthalmology, Yamagata University School of Medicine Yamagata 990-23.

Diao-Teng-San is a blended traditional Chinese herb medicine. It has been reported that Diao-Teng-San was effective for the treatment of patients suffering from hypertension. The narrowing of retinal arterioles is one of the important findings in hypertension. We examined the pharmacological effect of Diao-Teng-San on blood pressure and narrowing of retinal arterioles in spontaneously hypertensive rats (SHR) and stroke-prone SHR (SHRSP).

SHR and SHRSP (each 9 treatment cases and 5 control cases) aged 5 weeks were used. SHRs and SHRSPs were orally administered Diao-Teng-San at 200 mg/kg/day for 12 weeks. After these 12 weeks, the blood pressure was measured by the tail-cuff method. The narrowing of retinal arterioles was measured by the percentage ratio of the artery to vein caliber. The results were expressed as the mean ± standard error for each group. The significance of the difference was examined by a Students t-test.

After three months of Diao-Teng-San administration, the blood pressure of the SHR was significantly lower than that of the control group (treatment group: 207.6±21.0 mmHg, control group: 221.0±16.1 mmHg, P<0.05). In the SHRSP, the blood pressure of the treatment group was significantly lower than that of the control group (treatment group: 219.1±14.9 mmHg, control group: 241.2±13.1 mmHg, P<0.05).

The percentage ratio of the artery to vein caliber in the treatment group was significantly higher than that of the control group (SHR treatment group: 61.3±10.5 %, SHR control group: 41.0±7.9 %, P<0.05, SHRSP treatment group: 59.4±6.9 %, SHRSP control group: 46.2±4.4 %, P<0.05).

These findings suggest that Diao-Teng-San may lower blood pressure and inhibit the narrowing of retinal arterioles in SHR and SHRSP.