

The Effects of *Panax ginseng* and *P. quinquefolium* on Hemodynamics and Body Temperature in Healthy Young Men (III)

Jee Hwan Lee^{1)*}, Jung Ah Cho¹⁾, Chan Young Ki¹⁾, Yeon Kyoung Son¹⁾, Jeong Hill Park²⁾, Man Ki Park²⁾ and Yong Nam Han^{1, 2)}

¹⁾Natural Products Research Institute, Seoul 110-460, and ²⁾College of Pharmacy, Seoul 151-742, Seoul National University, Korea

The current study was performed to observe the effects of *Panax ginseng* (PG) and *P. quinquefolia* (PQ) on hemodynamics such as blood flow rate (BF), blood flow velocity (BV), heart rate (HR), systolic blood pressure (SBP) and diastolic blood pressure (DBP, and body temperature (BT) in healthy young men. After testing equality of variance, Student's t-test using PROC TTEST was examined to prove statistical differences between control and ginseng conditions at each time point. It was found that the BF data were fluctuated by personal deviation. In order to minimize the deviation, the results obtained for 6 hrs were reconstituted after dividing them into two periods of the first half from 1 to 3 hrs and of the latter half from 3.5 to 6 hrs. And then the reconstitution data and dose-response curves were obtained. Blood flow such as BF and BV shows significant increases both two periods in the dose of PG 2.25 and PG 9.0, whereas significant decrease in the dose of PG 4.5. However, in the PQ groups, the middle dose PQ 4.5 shows the highest significant increase among the three doses. Except for PG 2.25 in HR, other doses show significant decreases both in the first half and latter half. SBP of PQ 9.0 shows only a significant decrease in the first half; on the other hand, in the latter half, PG 4.5, PG 9.0 and PQ 9.0 significantly increase SBP. In addition, DBP of PG 2.25 and PG 4.5 show significant increase in the both periods. In the BT, PQ groups show gradual decrease from PQ 2.25 to PQ 9.0; however, PG groups show differently. PG 4.5 shows significant decrease, but PG 9.0 shows a increase without statistical meanings. In summary, PG is more effective in respect to keeping homeostasis of hemodynamics.