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Effects of *Epimedii Herba* on a Rat Model of Hypothyroidism Induced by PTU (6-propyl, 2-thiouracil)

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Abstract
Objectives: The symptoms of hypothyroidism are fatigue, cold intolerance, arthralgia, muscle cramps, dry skin, etc. Although hypothyroidism is a relatively common endocrinical disease, we do have many difficulties treating it effectively. The symptoms of hypothyroidism are similar to those of Yang deficiency in Oriental medicine. *Epimedii Herba* is a popular herb that has the effect of tonifying the kidney and strengthening Yang in Oriental medicine. In this study, we investigated the therapeutic effects of *Epimedii Herba* on a rat model of hypothyroidism induced by PTU (6-propyl, 2-thiouracil).
Methods: Twenty-four (24) two-month-old Spargue-Dawley (SD) rats were divided into 4 groups: 1) normal (n=6), 2) PTU-induced hypothyroidism control (n=6), 3) hypothyroidism rat treated with *Epimedii Herba* (n=6), 4) hypothyroidism rat treated with levothyroxine (n=6). PTU was administered for 4 weeks. *Epimedii Herba* and levothyroxine were administered for 2 weeks after PTU had been administered for 2 weeks, for a total duration of 4 weeks. At the end of the experiment, blood samples from all the rats were taken from their hearts and were analyzed.
Results: In comparison with the normal group, the PTU-induced control group significantly showed hypothyroidism with low T3 and T4 and with high TSH. In the *Epimedii Herba* group, T4 was significantly increased ($p < 0.05$). There was no significant difference in TSH between the *Epimedii Herba* treatment group and the control group and no significant differences were observed in biochemical lab tests and weight between the *Epimedii Herba* group and the control group.
Conclusions: These results suggest that *Epimedii Herba* could help thyroid cells to produce thyroid hormones. No significant side effects related with *Epimedii Herba* were found, suggesting that it is safe to administer. According to these results, *Epimedii Herba* may be a safe alternative medicine for the treatment of hypothyroidism.
Key Words: *Epimedii Herba*; 6-propyl, 2-thiouracil; hypothyroidism

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Experimental Study of Antigenicity of Sweet Bee Venom in Guinea Pigs

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Abstract
Objectives: This study was performed to examine the antigenic potential of pure melittin (Sweet Bee Venom - SBV) extracted from bee venom by utilizing the protein isolation method of gel filtration.
Methods: All experiments were conducted at Biotoxtech (Chungwon, Korea), an authorized non-clinical studies institution, under the regulations of Good Laboratory Practice (GLP). The antigenic potential of SBV was examined by using active systemic anaphylaxis (ASA) and passive cutaneous anaphylaxis (PCA) in guinea pigs. SBV was subcutaneously administered at 0.07 and 0.28 mg/kg and as a suspension with adjuvant (Freund's complete adjuvant: FCA). Ovalbumin (OVA) as a suspension with adjuvant was used to induce a positive control response (5mg/ml- FCA).
Results:

1. In the ASA test, experimental groups showed some symptoms, such as piloerection, hyperpnea and staggering gait of anaphylaxis.
2. In the PCA test, the low-dosage group did not show any antibody responses whereas the high-dosage group showed positive responses.
3. In the weight measurement and clinical observation, experimental groups showed no significant changes compared with the control group.
4. In the autopsy of the body, abnormalities of the lung were detected, which means that death may have been induced by anaphylactic shock.

Conclusion: The above findings suggest that SBV has an antigenic potential in guinea pigs. Further studies on the subject should be conducted to yield more concrete evidence.
Key Words: melittin; Sweet Bee Venom; antigenicity; ASA; PCA

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