

[P-31]**Effect of organophosphorous pesticides as neuro-endocrine disruptors on the immune system of Balb/c mice**

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Organophosphorus (OP) pesticides have largely replaced the use of organochlorine pesticides and have been widely used in agriculture and houses in recent years because of their rapid breakdown in water and their low environmental persistence. As a result, consumers are directly or indirectly exposed to organophosphorus pesticides through several food groups including meat, dairy products, fruits, vegetables, dried foods, and most processed foods in which a significant amount of pesticide residues have been found. However, thus far there have been few reports on the immunotoxic effects of OPs. In the present study, Balb/c mice were used to determine the immunotoxic effects of OPs, methidathion and pirimiphos-methyl. Results showed that methidathion dosage did not change significantly body weight, relative thymus and spleen weight, and thymus and spleen cellularities of Balb/c mice. Pirimiphos-methyl treatment also showed there is no significant changes in body weight, relative thymus weight, and thymus cellularity of Balb/c mice, but high dose treatment (120mg/kg) of pirimiphos-methyl significantly decreased relative spleen weight and spleen cellularity of Balb/c mice. On the other hand, LPS-proliferation response of splenocytes and ACTH concentrations in bloods were not affected by methidathion and pirimiphos-methyl exposures. However both methidathion and pirimiphos-methyl dosages reduced ConA-stimulation response of splenocytes.

The result indicate that high dose exposure of pirimiphos-methyl is affected on spleens of Balb/c mice, and future research will be assessed whether the effects of pirimiphos-methyl are directly reflected on the humoral immune function of Balb/c mice or not

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