

Z316 The effect of Ni²⁺ on the Intracellular Ca²⁺ transient in the 2-cell mouse embryos

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We reported that Ni²⁺ had overcoming effect in in vitro 2-cell block in the mouse embryos (Kor J Fertil Steril 22(1)). In this study, it is aimed to investigate whether Ni²⁺ should induce intracellular Ca²⁺ transient in the mouse embryos. Embryos were collected at post hCG 32hr from the oviduct of the ICR mouse and cultured in M2 medium omitted phenol red. Intracellular Ca²⁺ was checked by using a confocal laser scanning microscope and fluo-3AM. In 1mM Ni²⁺ treated medium which contained Ca²⁺(1.71mM), 48.3%(103/211) embryos showed [Ca²⁺]_i about 200 sec later. In the Ca²⁺-free medium, 54.2%(39/72) embryos showed [Ca²⁺]_i. In intracellular Ca²⁺-chelator, BAPTA-AM (20uM, 30min) pretreated group embryos showed 37.3%(22/59) [Ca²⁺]_i but response of this group occurred about 350 sec. In BAPTA-AM treatment in Ca²⁺-free medium, 5.3%(3/57) embryos showed [Ca²⁺]_i. In Danthrolene, RyR-antagonist treatment, 13.3%(4/30) embryos showed [Ca²⁺]_i. In Danthrolene treated in Ca²⁺-free medium 3.2% (1/31) embryos showed [Ca²⁺]_i. Summing up the above results, Ni²⁺ seems to induce Ca²⁺-release from the Ca²⁺-store even in the Ca²⁺-free medium, and ryanodine receptors are not as much as IP₃ receptors in the mouse embryos.

Z401 Effects of *Cordyceps militaris* (mycelium) on Protein Levels and Enzyme Activities in Male Rats

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The effects of *Cordyceps militaris* (mycelium) on body weight gain, protein concentrations, and enzyme activities were studied in growing male rats for 35 days. The rats were fed diets containing 2%, 3% or 4% mycelium of *Cordyceps militaris* (CM) powder. The body weight gain, and the concentrations of total protein, albumin, and creatinine in serum of rats fed all CM diets were similar to those in rats fed the control diet. The concentration of urea in serum was increased more in rats fed 3% or 4% CM diets than in those of rats fed control diet. The GOT and LDH activities in serum were lowered in rats fed all CM diets compared with those in rats fed control diet. The GPT, gamma-GTP, and alkaline phosphatase activities in serum were similar to those of all diet groups. The results indicated that the effects of *Cordyceps militaris* feeding were lowered GOT and LDH activities, and there was no difference in growth, serum protein concentration, alkaline phosphatase, GPT and GTP activities in rats.