

intended to study the monitoring of heavy metals (Cd, Pb, Hg), endocrine disruptors, in Korean people with study of 104 Korean normal adults and 47 placentas. This showed that the concentration of Cd was arithmetic mean $1.44 \pm 0.65 \mu\text{g/L}$, that of Pb was arithmetic mean $31.70 \pm 14.12 \mu\text{g/L}$ and that of Hg was arithmetic mean $6.30 \pm 3.08 \mu\text{g/L}$ in blood, the concentration of Cd was arithmetic mean $1.53 \pm 1.04 \mu\text{g/L}$, that of Pb was arithmetic mean $18.96 \pm 7.35 \mu\text{g/L}$ and that of Hg was arithmetic mean $2.72 \pm 3.16 \mu\text{g/L}$ in urine and the concentration of Cd was arithmetic mean $94.45 \pm 33.69 \text{ng/g}$, that of Pb is arithmetic mean $92.63 \pm 24.44 \text{ng/g}$ and that of Hg is arithmetic mean $43.24 \pm 30.78 \text{ng/g}$ in dried placentas. From these results, the concentrations of Pb and Hg in blood were higher than in urine and the concentration of Cd in blood accords with that of Cd in urine. The concentrations of Cd, Pb and Hg in blood and urine were within the reference ranges of American and Japanese clinical laboratories. Comparing the relative concentration ratio of Cd to Pb in blood and urine with that of Cd to Pb in placenta was relatively much higher than in blood and urine. It suggested that the placenta acted as a barrier to Cd.

[PB1-1] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Involvement of cyclic nucleotide pathway in regulation of gastric motility by ethanol

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To investigate underlying mechanism of ethanol in gastric smooth muscle relaxation, we examined the effect of ethanol on gastric motility and cyclic nucleotide pathway. Ethanol dose-dependently inhibited amplitude and frequency of spontaneous phasic contraction of cat gastric smooth muscle, whereas elicited tonic contraction at concentrations of more than 0.5%. Both spontaneous phasic contraction and 2% ethanol-induced tonic contraction were significantly inhibited by forskolin and sodium nitroprusside. Ethanol dose-dependently inhibited basal cyclic AMP levels and forskolin-induced cyclic AMP formation. On the other hand, ethanol significantly increased the basal cyclic GMP levels and sodium nitroprusside-induced cyclic GMP formation at low concentrations of less than 0.25%. However, ethanol at concentrations of more than 1% significantly inhibited sodium nitroprusside-induced cyclic GMP levels. These results suggest that regulation of gastric motility by ethanol is in part mediated via cyclic nucleotide pathway.

[PB1-2] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Role of cyclooxygenase-2 in chloroquine-induced apoptosis in A172 human glioblastoma cells

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Role of cyclooxygenase-2 in chloroquine-induced apoptosis in A172 human glioblastoma cells

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Chloroquine, widely used for the treatment of malaria as well as a variety of inflammatory diseases including rheumatoid arthritis, has been reported to induce neuromuscular complications. However, little information is available regarding the mechanism of chloroquine toxicity on the nervous system. We have examined the in vitro effects of chloroquine on DNA fragmentation, lipid peroxidation.