331 Effect of oophorectomy on serum levels of calcium regulating hormones
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It has been generally accepted that parathyroid hormone (PTH) secretion and 1,25(OH)2D production change after menopause. These endocrine changes are considered as one of the pathogenetic factors of osteoporosis.

We investigated whether these hormonal change would be observed in subjects who underwent oophorectomy before menopause in 4 years or less after operation. In 85 oophorectomized cases(OVX) and 46 histerectomized cases (HX), serum levels of Ca regulating hormones and urinaty levels of Ca and hydroxyproline were measured. Ca, Pi, osteocalcin and Al-P were significantly higher in OVX group than in HX group. The ratios of Ca/Cr and hydroxyproline/Cr in urine were higher in the former than in the latter. 1,25-D was significantly lower in OVX group than in HX group. In spite of a significant increase in Ca in OVX, there was no difference in PTH between the two groups. The significant negative correlation ($r=0.373$, p 0.05) between serum PTH level and dietary calcium intake was found in OVX but not in HX.

332 Effect of long-term estrogen therapy on the lipoprotein metabolism.
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In order to elucidate the effect of estrogen upon lipoprotein matabolism, related closely to hypercholesterolemia and coronary heart disease, the blood levels of remnant-like particles (called Lipo Z), cholesterol, HDL-Ch, HDL-Ch/cholesterol ratio, blood pressure and %fat mass were assayed before and six months to 3 years after oral administration of conjugated equine estrogen, Premarin (0.625mg per day) in 28 postmenopausal women.

Lipo Z-Ch level showed a significant decrease (from 8.24±2.05mg/dl to 4.61±1.59mg/dl; $p<0.01$), HDL-Ch level and HDL-Ch/cholesterol ratio showed significant increases (from 56.6±2.3mg/dl to 64.9±3.6mg/dl, from 27.4±2.1% to 31.7±1.7%, respectively; $p<0.05$). We conclude that estrogen therapy showed beneficial effects in enhancing the antiatherogenic factors.

333 Effect of estrogen derivatives on the proliferation of cultured aortic smooth muscle cells and their biosynthesis of collagen.
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It is known that the incidence of atherosclerosis is less in women before menopouse than men. In the previous paper, we reported that this fact would be mainly ascribed to the antioxidant effect of female hormone. Present study was undertaken to examine the effect of estrogen and its derivatives on the proliferation of cultured smooth muscle cells from rabbit aorta and that on the biosynthesis of collagen by the cells, since proliferation of smooth muscle cells and increase of collagen biosynthesis are involved in atherogenesis. As samples, 17ß-estradiol (E_2), 2-hydroxyestradiol (2-OH-E_2), and 2-methoxyestradiol (2-MeO-E_2) were used. Their effects on the proliferation of cells were examined by [^{3}H]thymidine incorporation into cells, and those on the biosynthesis of collagen, by [^{3}H]proline incorporation into collagen. Upon incubation of the cells with these samples at 37°C for 40 h, proliferation of the cells and biosynthesis of collagen tended to decrease at high concentration of either 2-OH-E_2 or 2-MeO-E_2.