

66 Bone mineral density of lumbar and proximal femur in pre- and postmenopausal women. Y.Negoro, T.Masahashi, M.Suzuki, M.Noguchi, M.Nakanishi, A.Tomita, Dept.Obst.and Gynec.,Clinical Laboratory for Clinical Investigation, Aichi Med.Univ.,Aichi.

The bone mineral density(BMD) of lumbar spine (L₂-L₄) and proximal femur (femoral neck and trochanter) was measured in 82 pre-, 72 postmenopausal women without fracture (F(-) group) and 31 postmenopausal women with fracture (F(+) group). Bone mineral density was measured by dual energy X-ray absorptiometry (Hologic, QDR-1000). The rate of decrease in F(-) group was higher in lumbar BMD, which showed significantly lower level than premenopausal women even in women aged 50 to 59 years. In F(-) group, lumbar BMD significantly correlated with age but there was no significant correlation between proximal femur BMD and age.

Lumbar BMD in women within 10 years after menopause was significantly lower than that in premenopausal women. On the other hand, proximal femur BMD showed significantly lower level only in women more than 20 years after menopause. F(+) group demonstrated significantly lower BMD level than F(-) group. These data showed that the different rate of decrease in BMD after menopause, and that woman with low BMD is at risk of fracture.

67 Effect of ageing and castration on bone density in rats. S.Kosha, Y.Nagata, Dept.Obst.and Gynec.,Fac.Med.,Kagoshima Univ.,Kagoshima.

Bilateral oophorectomy causes estrogen deficiency, which will subsequently affect bone metabolism. This study was performed for the purpose of finding how ageing could affect bone metabolism of those women having ovarian resection and a pertinent way of treatment. We divided the rats into 4 groups: 8-week old group, 16-week old group, 24 to 30-week old group, and the group more than 32 weeks old, 30 rats in each group. The FD(femoral bone density) with DEXA of the 8-week group and the 16-week group increased in the control group. In contrast, no increase was found in the castrated group. On the contrary, in castrated group, significant bone loss was found in both 24-week group and 32-week group. The only significant change of serum bone metabolism indicators(Ca, P, CT, PTH, BGP and Estrogen) secondary to the ovarian resection was E2 in all the four groups. Loss of bone density secondary to the castration in the young rats, which usually has a high rate of bone density increases were significantly repressed. Striking loss of bone density were found in the old castrated rats. These results suggest that a pertinent treatment is required even for the young women having castration in order to facilitate the bone formation.

68 The effect of fat distribution on menstrual disorder in obese women. S.Noda, T.Ikeda, M.Kaneko, I.Nakayama, N.Mori, Dept.Obst.and Gynec.,Miyazaki Medical College, Miyazaki.

The purpose of this study is to investigate the relationship between menstrual disorder and the distribution of body fat in obese women. Subjects were 26 women (Body mass index > 27) who visited the Department of Obstetrics and Gynecology, Miyazaki Medical College. The fat distribution was evaluated by a method of Matsuzawa et al, which measures the ratio of visceral fat area and subcutaneous fat area (V/S ratio) based on the CT scan X-ray film. The patients were divided into two groups. When the V/S ratio was above or equal to 0.3, this was classified in V type group. On the other hand, when the V/S ratio was below 0.3, this was grouped as S type. The V group was consisted of 12 patients and S group included 14 patients. In the group of V type, 8 out of 14 patients had menstrual disorder, while only 2 out of 14 patients in S type group. Sex hormone binding globulin (SHBG) level in the group of V type significantly lower than that of S type patient. Free testosterone of V type was significantly higher than that of S type. We concluded that the difference of V and S type fat distribution influences menstrual disorder in obese women.