

- 69 Denervation of the rat myometrium during pregnancy. J. Matsumoto, K. Kinoshita, K. Konishi, Y. Komeda, S. Kikuchi, Dept. Obst. and Gynec., Nihon Ikadaigaku, Kanagawa.

The effect of adrenergic nerve denervation in rat myometrium during pregnancy was examined. Adrenergic nerve was stained using glyoxylic acid, and also contractions of muscle strips were recorded. The number of nerves in sections of the myometrium is greater at 16 days pregnancy than 22 days, and less nerves were found in fetus containing part of the uterus than in parts which did not contain fetus. There was no significant difference in the number of nerves in 2 year old rats with history of pregnancy and in those without history of pregnancy. There appeared to be a correlation between the number of nerves and contractile activity in certain portions of the uterus. As pregnancy advanced, beta-adrenergic effect became dominant in circular muscle, however, enhanced alpha-adrenergic effect appeared in circular muscle of rats which were completely denervated by 6-hydroxydopamine.

- 70 The role of IL-6 in Human Milk. M. Maruyama, S. Saitoh, Y. Katoh, I. Moriyama, M. Ichijo, Dept. Obst. and Gynec, Nara Medical Univ. Nara

It is known that cytokine (BCDF and IL-1 etc.) is contained in human milk. We examined IL-6 contained in human milk which has BCDF activity. As a result we have shown that a large amount of Interleukin-6 (IL-6) is contained in human whey. (Method) Human milk is centrifugated at 3000rpm for 30min. Whey is stored at -80 C. Mononuclear cell (MNC) were separated by Ficoll-Hypaque technique, and cultured in RPMI 1640 medium with LPS, PHA, SAC. Assay of IL-6 is performed by bioassay using an IL-6 dependent cell line, MH60. BSF2 hybridoma cells. IgA is determined by ELISA. (Result) The concentration of IL-6 in colostrum was especially high and was significantly larger than its concentration of serum or late milk (milk at one month after parturition). The production of IL-6 was much more augmented in colostrum MNC than in peripheral blood MNC. IgA production of colostrum MNC stimulated by SAC was suppressed when anti-IL-6 antibody was present. This finding suggests that IL-6 contained in milk is closely associated with the local production of IgA in the breast.

- 71 OXT, PGE₂ and PGF₂ α stimulate the generation of inositol phosphates in the myometrium. T. Okawa, Y. Suzuki, K. Hoshi, A. Sato, H. Nakanishi^{*}, Dept. of Obst. and Gynec.,
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We have investigated a potential role for phosphoinositide breakdown by measuring the ability of a variety of uterotonic agents (OXT, PGE₂ and PGF₂ α) to stimulate the production of inositol phosphates in both non-pregnant (NP) and pregnant (P) rabbit myometrium. In NP, the mean percent stimulation of total inositol phosphate production in response to OXT (0.5IU), PGE₂ (10⁻⁵M) and PGF₂ α (10⁻⁵M) was 230%, 152% and 144% of basal production, respectively. And in P, those production in response to the agents was 485%, 198% and 153%, respectively. OXT, PGE₂ and PGF₂ α stimulated total inositol phosphates productions. The production by OXT in the P significantly increased, compared with those in the NP (p<0.05). But the productions by PGE₂ and PGF₂ α were not influenced by pregnancy. As the production by OXT is quite different with those by PGs, the different mechanisms may involve in the stimulation of phospholipase C by OXT or PGs.