Conversion rates into prostaglandin E_2, prostaglandin $F_{2\alpha}$ and 6-keto-prostaglandin $F_{1\alpha}$ in myometrial tissues treated with progesterone containing medium were significantly decreased when compared with the controls, however there were no significant changes in the tissues cultured with estradiol alone.

This investigation suggested that estradiol and progesterone could induce prostaglandin synthesis enzymes.

414. Microtubule Assembly in Uterine Tissue

K. HIRAOKA, H. KOSAKAI, T. TAKAYAMA, M. SATO, I.S. MORIYAMA and M. ICHIJO

Dept. Obst. & Gynec., Nara Med. Univ., Nara

Microtubule in vivo shows assembly and disassembly in response to a wide variety of chemical compound and physical condition. This study was investigated to determine the mechanism of microtubule assembly in uterine tissue and how it might be controlled by pregnancy. Tubulin was purified from human and rat uterine tissues. Specimen was washed and minced, then homogenized in 1 ml of Weisenberg buffer (0.1 M MES, 1 mM EGTA, 1 mM GTP, 0.5 mM $MgCl_2$) per gram of tissue with ultraturrax. The homogenate was centrifuged at 100,000×g for 1h. at 4°C. The pellet was discarded and supernatant was used for tubulin assembly. Microtubule assembly was enhanced by the addition of 1 M sucrose or 4 M glycerol with Hitachi 150-20 spectrophotometer. Assembly was followed by examination of electron-microscope and SDS PAGE. Microtubule assembly was inhibited by Ca 10^{-2} M, Premarin and terbutaline. Reassembly of microtubule in vitro was increased the addition of ATP, GTP, DHAS but remained constant by Ca 10^{-4} M, 10^{-3} M, E_1, E_2, E_3, progesterone, prostaglandin, ergotamine and oxytocin. Microtubule assembly in vitro of rat uterine tissue increased at 22nd day of gestation. These results suggested, microtubule in uterine tissue might be controlled by the chemical agents and related cell structural formation in uterine tissue.

415. The Ultrastructural Studies of Uterine Leiomyosarcoma

S. SAGAE, R. KUDO and M. HASHIMOTO

Dept. Obst. & Gynec., Sapporo Med. College, Sapporo

From the electron microscopic study on development of human uterine smooth muscle in the fetal period, it is considered that the process of differentiation is from mesenchymal stem cells to mature smooth muscle cells through fibroblastic cells, myofibroblastic cells and myoblastic cells.

Leiomyoma was consisted with almost all of mature smooth muscle cells. Low grade malignant leiomyosarcoma (LMS) had a monotonous composition of myofibroblastic or myoblastic type of cells. Malignant LMS had mixtures of various type of cells. However, a majority of tumor cells in well differentiated LMS was mature type of cells such as myoblastic cells or myofibroblastic cells. On the other hand, large number of tumor cells in poorly differentiated LMS was immature type of cells such as fibroblastic cells.

416. Studies on Contractility of Leiomyoma Tissues from Human Uterus

Y. TAMAISHI*, Y. SUGIYAMA* and H. ITO**

**Dept. Obst. & Gynec., Mie Univ. Sch. Med., Mie*
***Dept. of Pharmacology, Mie Univ. Sch. Med., Mie*

Smooth muscle myosin light chain kinase (MLCK) catalizes the transfer of γ-phosphate from ATP smooth muscle myosin. This reaction plays a major role in regulating smooth muscle contraction. Then we determined the MLCK activity and contractile capacity of leiomyoma tissues from human uterus. Spontaneous contractile activity of isolated strips of leiomyoma tissues was equal to those of normal uterine tissues. MLCK activity of leiomyoma was also not different from those of normal tissue even if we used myosin light chain from chicken gizzard, leiomyoma tissues and normal tissues as substrate for phosphorylation. Km value for ATP of partially purified MLCK from leiomyoma and normal tissue were 13.96 μM and 15.25 μM, respectively. These results suggest that the activity of contractility and MLCK from uterus was not influenced by the change to benign tumor of uterine muscle.

417. Correlation of Glandular Cells between C.I.S. Glandular Involvement and Metaplastic Changes

T. MUROYA, M. SUGITA, T. SUGISHITA and Y. TENJIN