

at least one year's duration in our infertile clinic during 1971-1978. Those procedures were carried out only when an ovulatory basal body temperature or secretory endometrium, satisfactory results of sperm count and post coital test had been obtained.

The curves obtained by kymographic hydrotubation were classified into three types. The diagnostic results of HSG and laparoscopy were classified into five grades. In 31 of the 43 patients with normal curves by kymographic hydrotubation who had been proved at least unilateral patent at laparoscopy. In 7 of the 16 patients showing patency failure with high pressure, patency failure could be explained by laparoscopy. In 17 of the 22 patients with occlusive curves the occlusion could be explained by laparoscopy.

Agreement between laparoscopic and hydrotubational findings was found in 55 cases (67.9%). Agreement between laparoscopic and hysterosalpingographic findings was found in 65 cases (69.1%), complete agreement in detail of both findings was less than this ratio.

Laparoscopic examination in infertile women with tubal disturbance was found to be most effective technique.

190. Intra Uterine Devices: Effects on Ultra-structure of Rat Endometrium with Scanning Electron Microscope

M. WATANABE, S. OHTA, N. IKENO, H. ENDO,
T. SHIMA, T. MORIZUKA and
C. YAMADA

*Dept. Obst. & Gynec.,
Sendai National Hosp., Sendai*

This report presents the results of the investigation of morphological changes of the endometrium in rat uterus using the intrauterine devices with scanning electron microscope.

We insert IUD which made of Cu, silver and gold, into the rat uterine cavity. These rats were sacrificed a week after the operation half a group and 2 weeks another half one. And fixed with OsO₄ for 2 hrs. The specimens were coated with carbon and gold, and were examined with a Hitachi mini SEM.

I compared the endometrium that inserted IUD with the opposite of the uterus.

Results: 1) There were a few changes in the microvilli of the endometrium after insertion of the device such as hypertrophy swelling disturbance of the ar-

rangement. 2) Diameter of the microvilli where intacted IUD was bigger than the contrast. 3) Those changes were seen to the microvilli of estrus and diestrus stage.

These morphological changes are thought one of the factors to explain the mechanism of IUD.

191. Spermicidal Activity of Non-ionic Surface Active Agent Nonylphenoxypolyethoxyethanol

H. KANASUGI, S. KAWAGOE, T. ODA and
M. HIROI

*Dept. Obst. & Gynec.,
Yamagata Univ. Sch. Med., Yamagata*

Recently population growth has led to social problem in the world. Although contraceptive pill and intrauterine device (IUD) became more popular in developed country. On the other hand condom and tubal ligation are commonly used in Japan. But condom is not so effective as pill or IUD and surgical technique means permanent sterilization. Therefore simple, inexpensive and reliable contraceptive techniques are needed as public health service. Many spermicidal agents introduced into vagina are designed, but they are effective only for short time. In this paper non-ionic surface active agent, nonylphenoxypolyethoxyethanol, are investigated for its spermicidal effect in vivo and in vitro. Nonyl-9 are diluted in the buffer solution at the concentration of 5-160 ug/ml and incubated at 37°C for 3 to 60 minutes with sperm, then immobilized sperm are counted in that solution. More than 15 minutes incubation, 18% of motile sperm are observed at 40 ug/ml. But no motile sperm are observed at 160 ug/ml within 3 minutes incubation. In Huhner test almost all females showed decrease of sperm motility after insertion of nonyl-9 into vagina.

192. Sugar-fatty Metabolism and Anterior Pituitary Grand Function on the Oral Contraceptive

M. HAYASHI, A. ISHII and T. KAMIYA

*Dept. Obst. & Gynec.,
St. Marianna Univ. Sch. Med., Kawasaki*

Purpose: This study was performed to research sugar-fatty metabolism and the effect of anterior

pituitary gland function which were administered synthetic steroid hormone (norethisterone 2.0 mg, mestranol 0.1 mg).

Method: The glucose 50 g tolerance test was performed on the following two groups:

1) Experimental group; 20 subjects administered by synthetic steroid hormone during a period of 1-120 cycles.

2) Control group; 18 non-pregnant healthy women. Blood sugar level, IRI, TG, FFA, HGH, FSH and LH of each group were measured. Furthermore, the changes of pituitary gonadotropin secretion of two groups administered LH-RH 100 ug or TRH 500 ug were observed.

Results: The response types of HGH were divided into 3 types; 1) normal type, 2) low-responsive type, 3) high-suppressive type. The results of LH-RH and TRH test on 3 HGH-type were as follows. FSH and LH levels were generally suppressed on LH-RH test, while FSH in HGH-normal type and LH in HGH-low responsive type and HGH-normal type were relatively increased. PRL level on TRH test showed increase in HGH-normal and low-responsive type, significantly increase in HGH-suppressed type.

193. On Criteria for Evaluation of Glucose Tolerance Abnormality in Pregnancy (Series II)

T. NOHIRA, T. TAKAHASHI, A. UEDA and
T. MATSUDA

*Dept. Obst. & Gynec.,
Tokyo Med. College, Tokyo*

Glucose tolerance abnormality is evaluated today according to the criteria based on O.G.T.T. values recommended by the Japanese Diabetes Mellitus Committee. Variation in pregnancy, however, is not covered in these criteria, which makes them inadequate for estimation of the effect of the abnormality on obstetric complications, growth of fetuses and development of the offspring. We tried to provide a new set of criteria through analysis of blood sugar levels and I.R.I. patterns in pregnant women with impaired carbohydrate metabolism.

Method of Experiment: Of 176 pregnant women with impaired carbohydrate metabolism, those with toxemia of pregnancy, hydramnion, urinary ketone bodies (+) or L.F.D. were selected, and their blood sugar levels as well as I.R.I. patterns were analyzed to establish new criteria.

Results of Experiment: 1) The conventional criteria based on O.G.T.T. have been inadequate for definitive differentiation between pregnant women with impaired glucose tolerance not presenting complication and those presenting complication or carrying L.F.D.

2) Glucose tolerance is best reflected in the test results, if the baseline values 120 min after O.G.T.T. are placed at Δ B.S. (120-F) 35 mg/dl and Δ I.R.I. (120-F) 20 μ v/ml, which are arranged in various combinations.

3) If, 120 min after O.G.T.T., the values for B.S. (Δ g) and I.R.I. (Δ g') are respectively >35 mg/dl and <20 μ v/ml, obstetric complications frequently develop.

194. Effect of Sodium Chloride on Blood Pressure Regulation and Fetal Development in Rats

A. HASHIMOTO, H. INAO, M. NAKAYAMA,
K. YAGI, N. MOTOHARA and
M. MAEYAMA

*Dept. Obst. & Gynec.,
Kumamoto Univ. Med. Sch., Kumamoto*

This experiment was carried out to study physico-pathological changes in rats treated with sodium chloride.

Groups in both normotensive Wister rats (NTR) and spontaneously hypertensive rats (SHR) received water drinking (1% NaCl) (N-group). The administration of water drinking was carried out for 3 weeks in non-pregnant rats and for 2 weeks in pregnant rats, respectively. All of the pregnant rats in N-group had a moderate rise of blood pressure compared with non-treated group (C-group). Sensitivity to angiotensin II in pregnant NTR was significantly high after treatment. The mean levels of plasma renin activity, plasma aldosterone and urinary kallikrein (Kato's Method) markedly decreased in N-group than those in C-group, while these moderately increased in pregnant rats compared to non-pregnant rats. Histologically, thickening of blood wall at media and intima and increased foamy cells were observed in various arteries. Fetal mortality rate on the 19th day in treated pregnant group was higher than that in the control. These results suggest that sodium chloride may play some role as a predisposing factor of developing hypertension in pregnancy.