

Kyorin Univ. Sch. Med., Tokyo

To evaluate the utility of the X-ray CT (CT) in diagnosing ovarian tumor, possibility of estimating their histological types and differentiation of benignity and malignancy were studied using CT.

On 58 cases with ovarian tumor, the preoperative estimation of histological types made with the CT, was compared with postoperative final diagnosis. Equipment used was EMI-CT-5005 or CT/T, and the scanning methods were of our routine previously reported.

Agreement with the histological diagnosis (sensitivity) was 100% in dermoid cyst, 76.9% in endometrial cyst, 75% in serous cystadenocarcinoma and 66.7% in fibroma. The agreement in benign tumors was 75% and that in malignant tumor was 35.7%.

In the differentiation of benignity and malignancy, when malignancy is made positive, the results obtained were 13 cases of true positive, 40 cases of true negative, 4 cases of false positive and one case of false negative, and the diagnostic accuracy was 91.4%.

The results suggest that the CT is highly effective in the differential diagnosis of benign and malignant ovarian tumors, and that the estimation of histological types comes to 75% agreement in benign tumor but was difficult in malignant tumors.

414. Short-chain Fatty Acid and Aliphatic Hydrocarbon Produced by *Trichomonas Vaginalis* in Vitro

T. ISHIGURO and Y. YOSHIDA

*Dept. Obst. & Gynec.,
Shiga Univ. Med. Science, Shiga*

Five strains of *Trichomonas vaginalis* were inoculated in Cystein-Peptone-Liver infusion-Maltose medium (CPLM medium), and short-chain fatty acid in the culture fluid was examined by gas chromatography. Significant increase was found in three fatty acids including acetic acid, propionic acid and isovaleic acid. Gas found in the culture tube was also studied by gas chromatograph mass spectrophotometer system. Carbon dioxide (CO₂) and three aliphatic hydrocarbons including methane, ethane and ethylene were identified. These fatty acids and aliphatic hydrocarbons are supposed to be produced by *Trichomonas vaginalis* in vitro, presumably during the metabolism of amino acids. Recently such fatty acids as *n*-butyric acid, valeric acid or propionic acid have been shown to have an activity to enhance the effect of

tumor promoters in vitro. Therefore, present findings may give a support for the hypothesis that *Trichomonas vaginalis* is a part of exogenous risk factors in cervical cancer. Although the carcinogenic effect of low molecular aliphatic hydrocarbons was not discussed in the present paper, it is clinically of interest that such gases are responsible for the foamy discharge in patients with *Trichomonas vaginalis*.

415. Significance of Measurement of IgM-TPHA in Pregnant Syphilis —As an Indicator for Necessity of Treatments on Mothers and Newborns—

I. FUCHI, T. MIYOSHI, Y. TAKASHIMA,
K. KITAMURA, Y. INOUE and
K. NODA

*Dept. Obst. & Gynec.,
Kinki Univ. Sch. Med., Osaka*

In order to establish a more suitable therapy than the present antiluetic therapy, measurement of fractional TPHA levels was attempted and whether the measurement result might be an indicator for necessity of treatments was discussed.

Methods: 0.35 ml of serums was fractionated on a column filled with Sephacryl S-300 and TPHA antibodies were determined on IgM and IgG fractions, separately. A mean value of TPHA titer conducted on the three peak IgM fractions was regarded as a TPHA-IgM level and a TPHA-IgG level was obtained in the same manner.

Results: Pregnant women with congenital and late syphilis were observed, even they were STS-TPHA positive, without receiving any treatments unless IgM-TPHA was detected. In addition, when IgM-TPHA was not detected after fraction of the umbilical blood had been tested on TPHA, newborns were followed up on the basis of various test results without undergoing any therapy. As a result, STS disappeared within 3–4 months after birth, and TPHA and FTA-ABS disappeared within 6 months after birth.

Conclusion: When IgM-TPHA is undetectable, no treatments are necessary for pregnant women. Newborns need not undergo any treatment unless IgM-TPHA is detected in the umbilical blood.

416. A Study of Anaerobic Bacteria in Genital Infections —Mainly on Clinical

and Pathogenic Significance of Them—

S. MATSUDA and T. KASHIWAGURA

*Dept. Obst. & Gynec.,
Kōtō Hosp., Tokyo*

K. KOKUHO, S. TAKASE, M. NOJIMA
and H. FURUYA

*Dept. Obst. & Gynec.,
Juntendo Univ. Sch. Med., Tokyo*

Among genital infections, polymicrobial infections have been increasing in recent years. We therefore studied clinical and pathogenic significance of anaerobic of bacteria which are a main cause of these infections.

In 73 cases of intrauterine infections, pyosalpinx, Douglas pouch abscess, Bartholin gland abscess, etc., anaerobic bacteria were isolated from more than a half of the cases of intrauterine infections, pelvic abscess, and Bartholin gland abscess, i.e. 53.9%, 56.5% and 54.2% respectively.

Of 40 cases which showed presence of anaerobic bacteria, 20% showed growth of anaerobic bacteria only and 80% had polymicrobial infections with aerobic and anaerobic bacteria. Of 30 control cases of nonspecific vaginitis, polymicrobial infections accounted for 63.3%. Compared with cases of polymicrobial infections with both aerobic and anaerobic infections, those cases infected with anaerobes alone tended to be mild in terms of the condition of the disease and in the course of therapy.

For a help to elucidation of pathogenic significance of anaerobic bacteria, we induced experimental intrauterine infections in rabbits and observed that the combination of Bacteroids and E. col caused especially severe lesion.

417. Epidemiological Aspect of Group B Streptococcal Infection in Perinatal Period

N. KADOI*, Y. SAITOH and K. HOSHI

**Dept. Neonatology,
Takeda General Hosp., Fukushima
Dept. Obst.,
Takeda General Hosp., Fukushima*

Group B streptococcus (GBS) infection in newborns is on the trend of increase not only in western countries but also in Japan. As the most important rout of

transmission of GBS to neonate is vertical from mother during perinatal period, survey of GBS vaginal carrier rate of pregnant women was undertaken to profile epidemiological aspect of GBS.

Our latest survey of total 3311 samples from 2287 pregnant women using Todd-Hewitt broth with gentamicin sulfate and nalidixic acid resulted 12.2% of vaginal colonization rate. Distribution of serotypes of GBS obtained from vagina of pregnant women, Ic and III types were predominant while Ia and II types were seen very occasionally. During the pregnancy, the colonizations were not constant. By analysing colonization pattern, we proposed to classify GBS carrier as follow; transient carrier, intermittent carrier, chronic carrier.

Neonatal GBS colonization rate among infants delivered from GBS carrier mother were only 4.3%, most of colonized infants were newborns of chronic carrier mother. No infant developed amniotic infection type of GBS infection.

418. Prophylactic Chemotherapy in Gynecologic Operations

M. SAITOH, S. USUKI, H. TSUNODA,
H. IWASAKI, Y. MIYOSHI* and
A. ICHIKAWA**

*Dept. Obst. & Gynec.,
*Dept. Bacteriology,
**College Med. Technology & Nursing,
Univ. Tsukuba, Ibaraki*

The purpose of this study was to find the best method to prevent infection using MIC of bacteria isolated from 47 patients with benign or malignant uterine diseases.

Specimens were collected from vaginal contents, cervixes, fallopian tubes, parametria, endometria and lymph nodes. Forty five of 66 aerobic isolates were Gram positive cocci (*S. epidermidis*, *S. aureus* etc.) and 21 were Gram negative bacilli (*E. coli* etc.). Thirteen of 48 anaerobic isolates were Gram positive cocci, 24 were Gram positive bacilli and 11 were Gram negative bacilli. Cefems showed the lowest MIC in aerobes, while ABPC revealed the lowest MIC in anaerobias. Some of the bacteria isolated from tissues were poorly sensitive for some of antibiotics.

These results suggest that the bacteria may be present as indigenous in the female internal genital organs and that they may cause infection. Furthermore these results indicate that in order to prevent infection the prophylactic combination therapy of Cefems and ABPC would be effective.