2162

#### \*Dept. Obst. & Gynec., Osaka Welfare and Pension Hosp., Osaka

Three-dimensional ultrasonograms of living fetuses which were applied the automated water-path scanner (UI-Octoson) and stroboscopic analyzing monitor (SAM) improved the anatomical orientation of the fetus in the uterus. Though SAM was at first developed for the purpose of the geological search of precious metals or petroleum, it was also used in medical image investigation. About 80 cinefilms of fetal longitudinal section of 2 mm interval were superpositioned and projected in hollow space by controlled stroboflash. The three-dimensional figure of fetus was able to visualize in different angle and also the internal organs-brain, spine, lung, heart, liver and scrotum.

## 231. Assessment of Follicular Development and Peritoneal Fluid during the Periovulatory Period by Ultrasound

K. SENGOKU, M. ISHIKAWA, M. KASAMO, H. MIZOGUCHI, K. YAMASHITA and T. SHIMIZU

#### Dept. Obst. & Gynec., Asahikawa Med. College, Asahikawa

Follicular development and subsequent ovulation were studied in infertile women by the estimation of plasma estradiol levels, luteinizing hormone and ultrasound. The correlation between the  $E_2$ , P levels and ultrasonic demonstrations in peritoneal fluid during the periovulatory period were also discussed. The results were as follows.

1) The ultrasonographic signs of ovulation occurred within 24 hours from the day of LH peak in 58 of 84 cycles and within 48 hours from the day of  $E_2$ peak in 50 of 77 cycles.

2) In 28 of 55 cycles, ultrasound examinations demonstrated the free fluid in the cul-de-sac at ovulation, and concentrations of  $E_2$  and P in peritoneal fluid dramatically increased after ovulation.

3) Real-time and static scanning measurements correlated well in 22 cycles in whom comparisons were made.

# 232. The Assessment of Fetal Growth in Multiple Pregnancy by the Real-time Ultrasono-tomography

M. ASADA, J. MINAGAWA and T. YAMADA

Dept. Obst. & Gynec., Minoh City Hosp., Osaka

K. MIYAKE

### Miyake Maternity Clinic, Okayama

#### Y. CHIBA

Dept. Perinat., National Cardio Vascular Center, Osaka

The serial real-time ultrasonogram method was carried out in thirty-seven multiple pregnant women for the early diagnosis of multiple pregnancy and the assessment of fetal growing. The crown-rump length (CRL) was measured in first trimester of pregnancy, and the biparietal diameter (BPD), the cross-sectional area of fetal trunk (FTA) and fetal femur length (FL) were simultaneously examined in second and third trimester of pregnancy. These date were plotted on the curve of fetal growth in singleton for the evaluation of intrauterin fetal growth. The obtained results were as follows.

1) Most of the multiple pregnancy by ovulatory induction were initially diagnosed at least by ten weeks of gestation.

2) Antenatal diagnostic accuracy of small for date (SFD) was 20% by the estimation of BPD, 33.3% by FTA, 62.7% by FL, respectively.

3) However, diagnostic accurecy could be risen mostly up to 100% by using the computerized formula which was made by ME Group of Osaka University Obstetrics and Gynecology.

These date suggested that antenatal ultrasonographic estimation of fetal growth was really useful for perinatal management in multiple pregnancy.

# 233. Studies on Fetal Weight Estimated by the Size of Fetal Abdomen Detected in Ultrasonic Biometry Assisted with Microcomputer System

N. MIYAMOTO, T. TSUZAKI, M. TATSUMURA and K. MAEDA

> Dept. Obst. & Gynec., Tottori Univ. Sch. Med., Tottori

Ultrasonic fetal abdominal curcumference (AC) and abdominal area (AA) were measured in 104 patients within 48 hrs prior to the delivery. The parameteres were measured by simple digitizer connected with a microcomputer (NEC PC-6001). A good correlation was found between birth weight and AC