volunteers and 104 patients, respectively.

2) In the serial studies, appearance of H from day −6 reflects increases in E₂ levels and it was observed with high frequency (100%) from day −3 to day 0. Appearance of E from day −1 reflects increases in P levels and it was observed with high frequency (100%) from day +1 to day +8. C, that observed with high frequency (80–100%) throughout the proliferative phase, disappeared to 20–30% since day +3.

3) Same results were obtained from the cross-sectional studies in the infertile patients.

284. Comparative Study of Ultrasonography, X-CT and MRI in Diagnosis of Ovarian Tumor

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To evaluate the diagnostic potentials of ultrasonography, X-CT and MRI in diagnosing ovarian tumors, the preoperative diagnoses obtained by these three modalities were compared with the postoperative pathological reports in 33 patients (30 cases of ovarian tumor, 1 case of adnexal abscess and 2 cases of uterine fibroids). MR images were taken with the use of the pulse sequences of IR, short SE and long SE. Seven cases in eight ovarian carcinomas were correctly diagnosed by each of the three techniques. In nine cases of endometrial cyst, seven cases were correctly diagnosed by ultrasonography and four and six by X-CT and MRI respectively. Seven cases of dermoid cyst and six cases of mucinous cyst were all correctly diagnosed by each of the techniques. Endometrial cyst and mucinous cyst were clearly differentiated by MRI.

We conclude that in diagnosing ovarian tumor ultrasonography should be the first choice and that MRI could be usefull when histology is difficult to speculate by ultrasound. When malignant tumor is suspected, both MRI and X-CT should be performed to reinforce the diagnosis and to evaluate the advancement of the disease.

285. Observation of Uterine Endometrium by Magnetic Resonance Imaging

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In this paper, specific feature and cyclic changes of the uterine endometrium displayed by Magnetic Resonance Imaging (MRI) are reported. MRI has several merits which the usual methods lack, for example lack of ionizing radiation, no known biological hazards and facility of multidirectional imaging.

20 aspects from 9 cases were classified on the menstrual changes T₁ and T₂ values of the uterine endometrium, basal layer and myometrium.

In the pelvic sagittal section, those endometrium and myometrium are clearly displayed and myometrium also between them.

The MRI unit in our hospital uses regisitive magnet, Magneton M5, Simens which is used at a field strength of 0.5 Tesla.

Moreover, each areas were measured and compared with cyclic changes. Area of the endometrium layer, showed increase in menstrual and proliferative phase while that of basal on decreased.

Since T₆ value were not affected by body moving, it is expected to obtain more correct feature. Both T₁ and T₂ values showed high in endometrium, and on secretory phase.

As for results 1) MRI showed best figure on the endometrium by medium sagittal section, 2) Both differential diagnosis and semiquantitative observations on the endometrium and basal layer are possible, 3) Both T₁ and T₂ values in the endometrium showed high during secretory phase.

286. The Development of a New Flexible Hysteroscopescope and its Clinical Application

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Hysteroscopy is the most effective method for intrauterine diagnosis. Most kinds of hysteroscope are rigid type. Cervical dilatation and insertion of the trocar are necessary for hysteroscopy. These procedures can be very painful to the patient. Also subsequent blood clotting and injury to the endometrium may interfere with the diagnosis. With the support of the Fugi optical company, a flexible soft and rigid type hysteroscopescope (3.7 mm in diameter) was developed. The scope is divided into three portions; a front flexible part, a rigid middle part and a soft rear part. Cervical dilatation and anesthesia were not
required even in a primiparous woman. The operator can observe the cervical canal, the uterine cavity and the tubal ostium very easily in a comfortable position. From Nov. '85 to Mar. '87 we carried out hysteroscopy in 719 patients with this new scope. The fluid medium which we used was a solution of 10% dextrose in water. The indications for hysteroscopy were abnormal uterine bleeding (310 cases), uterine myoma (138 cases), Infertility (107 cases), post-transcervical resection (47 cases) and others (117 cases). No complications were encountered during or after the procedure. The results were satisfactory. This soft and rigid type flexible hysteroscope has been proved an efficient tool for intrauterine diagnosis.

287. Laparoscopic Diagnosis and Evaluation of Danazol Therapy and R-2323 Therapy of Endometriosis in Sterility
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In 46 steril women, endometriosis externa were diagnosed and classified laparoscopically. 34 cases were delayed mild by Beecham's classification and also 37 cases by Sugimoto's. These cases were treated by Danazol 400 or 300 mg/day for 6 months or R-2323 5 or 10 mg/week for 6 months. After chemotherapy, all cases were examined by re-laparoscopy and were evaluated the effects of chemotherapy according to blueberry spot, adhesion and chocolate cyst as well as dysmenorrhea and other complaints.

The results were as follows:
1) Dysmenorrhea was relieved in 45.5% of Danazol group and 60.0% of R-2323 group, 2) Blueberry spot was decreased or paled in 75.0% of Danazol, 61.9% of R-2323. 3) Adhesion was partially separated spontaneously in 63.6% of Danazol, 66.7% of R-2323. 4) Chocolate cyst size became smaller in 77.8% of Danazol and 60.0% of R-2323. 5) Prostaglandins in ascites, prostaglandin (PG) E_2 concentration was decreased (p<0.05) after chemotherapy, and PG F_2 alpha and thromboxane B_2 were decreased but not significant. 6) Finally, 7 of 25 Danazol group and 4 of 21 R-2323 group conceived after chemotherapy.

288. (Abstract is not available)
J. Takayama, M. Ikeda, T. Mitsumoto and K. Noda

289. Analysis of Red Blood Cell Surface Antigen by Flowcytometry
M. Ohashi, I. Tamura, N. Echizenya, Y. Nakamura, A. Takano and S. Shinagawa

A sensitive method for the detection of human red blood cell surface antigen by the use of flowcytometry was presented. Human red blood cells were mixed with anti-blood type serum and stained with fluorescein isothiocyanate labelled sheep anti-human globulin for the detection of surface antigen by flowcytometry with FACS 440 (Becton Dickinson Co., Ltd.). The Rh-D positive red blood cells could be detected up to the level of ratio of 1/512 with Rh-negative red blood cells by flowcytometry.

On the other hand, reactivities of E negative (ee) and E heterozygous (Ee) and homozygous (EE) red blood cells against anti-E serum could be detected up to the level of 1.78 ± 2.32 per cent, 52.94 ± 9.25 per cent and 78.23 ± 11.08 per cent, respectively.

From these results the authors are the opinion that an analysis of red blood cell surface antigen by flowcytometry seems to be clinically available for the detection of fetomaternal bleeding.

290. (Abstract is not available)
K. Yamamoto, J. Takeyama, M. Ohta, M. Ikeda and K. Noda

291. Prognostic Potential of Serum CA 125 Levels in Patients with Endometriosis and Treated with Danazol
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We have made use of serum CA 125 as a marker for differentiation of adenomyosis from myoma uteri and for a diagnosis before treatment in patients with endometriosis. We now report that serum CA 125 is