

tion of hair was normal. The eye grounds were normal. X-ray examination of the skull showed a normal sella turcica.

*Pelvic examination.*—The hair on the vulva was rather sparse; the perinaeum was non-scapoid; the hymen was intact. Rectal examination showed the uterus to be small, and of normal shape and position. The cervix was small and rather long.

*Treatment.*—On November 30, 1929, a dilute extract of placenta was administered by mouth. This was gradually increased. In all, 500 rat units were given. It was discontinued on December 22nd, on which date menstruation began, lasting four days, with no pain or vomiting or other untoward symptoms. Menstruation reappeared spontaneously on January 17, 1930, lasting four to five days, and being associated with no untoward symptoms. She had received no extract since December 22nd.

#### CASE 2

A Canadian, married, aged 26, complaining of nervousness, loss of weight, and comparative amenorrhœa.

*Personal history.*—She had had a curettage after abortion one year ago, during the second month of gestation, since which time the menses had become scanty, lasting only part of a day.

Menstruation had begun at the age of 13, and was of the four-day type, occurring every 28 days, and causing no special symptoms. Her personal history contained nothing of importance.

*Physical examination,* on December 14, 1929, showed her to be thin and nervous, weighing 119 lbs., and showing signs of early but acute hyperthyroidism. Her basal metabolic rate was +29. The general physical examination was otherwise negative.

*Pelvic examination.*—Vagina marital; cervix normal; uterus small and hard.

*Treatment.*—On December 14th she was given five c.c. of the extract by mouth, three times daily (one c.c. is equal to five rat units). On January 11, 1930, she menstruated three full days. On January 17th the extract was discontinued. On January 29th the basal metabolic rate was found to be +1. Her weight was now 127 lbs., and her nervous symptoms had disappeared.

#### CASE 3

A Canadian, unmarried, aged 28, complaining of dysmenorrhœa.

*Personal history.*—She had had scarlet fever at the age of five, measles at ten, and influenza at 16. Appendectomy had been performed at 18.

Menstruation had begun at the age of 13½ years, and appeared regularly every 28 days. It was accompanied each time by intense abdominal pain, at times necessitating a sedative for relief. Vomiting also accompanied each epoch.

*Physical examination.*—She was of excellent physique, and the general examination was negative.

*Pelvic examination.*—Rectal examination showed the

hymen to be intact and the cervix to be normal in length. The uterus was acutely anteverted. Her last menstrual period had been December 26, 1929.

*Treatment.*—On January 9, 1930, she was given the extract by mouth; 75 rat units were administered daily for eight days. She menstruated from January 20th to the 25th, and for the first time in her life the menstruation was not accompanied by either pain or vomiting.

During the course of treatment certain patients have manifested symptoms of nausea, whilst others experienced some discomfort in the pelvic region. Others stated that they had experienced dreams of a vivid and unusual character. Severe headache and mental depression have also occurred. As a rule the patients voluntarily expressed a feeling of well-being in from four to five days after withdrawal of the extract.

It is interesting to note that in view of the well established fact that the extract is without effect on the oöphorectomized rodent, clinically, one cannot expect relief from menopausal symptoms after pan-hysterectomy. One such case was studied, with the anticipated failure to obtain any beneficial results.

#### COMMENT

The suggestive results obtained in this small group of cases have encouraged us to continue the experiments in the clinical use of this hormone on a more elaborate scale. Our experience thus far has demonstrated that patients should be selected, hospitalized and thoroughly investigated before and during the administration of this percental extract. A detailed report of such clinical studies will be made at a later date.

It is hoped that such studies will throw new light upon the problems of ovarian dysfunction and hyperthyroidism; and in addition, that the study of the ovary-stimulating hormone in the blood, and its distribution in the placenta of both the normal and the toxæmic pregnant woman, will help to unmask the etiology of certain of the so-called toxæmias of pregnancy.

REVOCABLE STERILIZATION OF THE FEMALE.—Haberlandt since 1919, has been experimenting on the problem of producing temporary sterility in female animals. Subcutaneous transplantation of ovaries from pregnant rabbits and guinea-pigs produced temporary sterility in these. The effect is thought to be brought on by the formation of a hormone in the transplanted corpus luteum, which inhibits follicle maturation. After resorption of the transplanted ovaries the animals became pregnant and gave birth to mature, normally developed,

living young. Sterility could be obtained for two to three months. Haberlandt obtained identical results by the daily subcutaneous injection of certain ovarian and placental extracts on the market. He is convinced of a hormonal action in securing temporary sterility in these animals. It is not inconceivable, therefore, that, when we know more of ovarian hormones and when ovarian extracts are really active, Haberlandt's work on animals may be of practical value in producing the temporary or revocable sterilization of women—*Zentralbl. f. Gynäk.* 51: 1418, 1927.