of estrogen and progesterone or inhibition of follicle and corpus luteum development. Salmon[5] has shown that the hyperactive hypophysis of the human female castrate can be inhibited with testosterone propionate. It seems logical to assume, therefore, that the suppression of estrogen and progesterone effects in the endometrium, which occurred in the cases reported here, following the administration of testosterone propionate, may be brought about by a similar mechanism—*viz.*, inhibition of the gonadotropic factors (both follicle stimulating and luteinizing) of the hypophysis.

Loeser[6] reported the observation that diminution in bleeding occurred in cases of metrorrhagia following administration of testosterone propionate. He cites a case of irregular menstruation associated with endometrial hyperplasia in which the endometrium became atrophic after 500 mg of testosterone propionate, and suggests inhibition of the hypophysis as a possible explanation of the action of the testosterone propionate.

10014

Effect of Progesterone on Fallopian Tube Contractility.

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It has been previously shown that the Fallopian tubes in women after the menopause lose the rhythmic contractions which, in cyclical women, can be recorded on a kymograph.[1] It was further shown that regular rhythmic contractions can be restored to the Fallopian tubes by the administration of adequate doses of estrogenic hormone.

In the present investigation, an attempt was made to evaluate the effect of progesterone on the Fallopian tube contractility. Five postmenopause women were selected whose vaginal smear studies revealed definite estrogen deficiency. Preliminary control kymographic recordings of the tubal contractions were obtained at weekly intervals, employing the Rubin insufflation apparatus.[2] The patients were then each given a course of estrogen injections in the form of estra-

5 Salmon, U. J., PROC. SOC. EXP. BIOL. AND MED., 1937, **37**, 488.

6 Loeser, A. A., *Lancet*, 1938 (Feb. 12), 373.

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2 Rubin, I. C., *J. A. M. A.*, 1920, **75**, 661; 1928, **90**, 99.

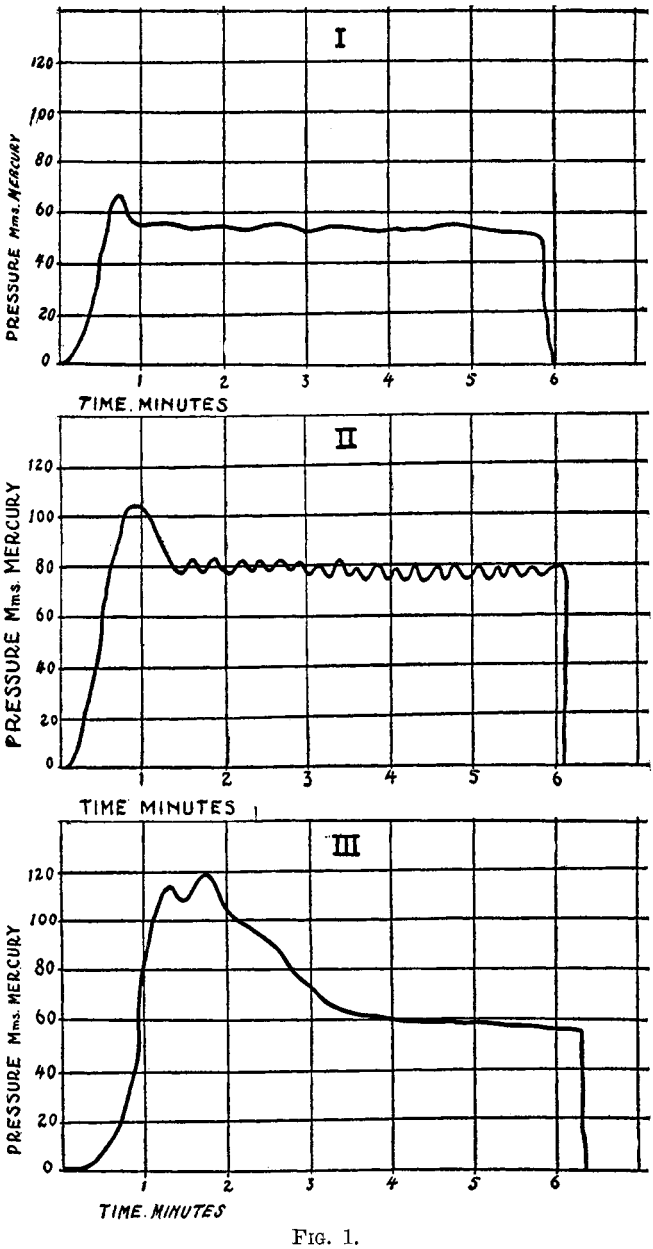

FIG. 1.

Case M.K. Age 47. Last menstrual period 18 months before.

I. Preliminary recording, showing absence of tubal contractions.

II. Tubal contractions after 820,000 I.U. estradiol-benzoate.

III. Recording taken 2 hours after tracing (II) and after 20 mg progesterone—revealing inhibition of tubal contractions.

diol-benzoate* (Progynon-B). The total dosage varied from 450,000 to 900,000 I.U. given intramuscularly in divided doses over a period of 10 days. At the end of the course of estrogen injections, recordings of tubal contractions were again obtained. In each case the preliminary control recording revealed a complete absence of tubal contractions and, after the estrogen administration, regular rhythmic fluctuations appeared.

Immediately following the last recording of tubal contractions, the patients were given 20 mg of progesterone* (Proluton) intramuscularly in 4 cc of sesame oil. The patients were then again insufflated 2 hours later. The recording taken 2 hours after the administration of the progesterone revealed a complete absence of pressure fluctuations, indicating inhibition of tubal contractions. The kymographic recordings of a typical case are presented in Fig. 1.

It would appear from the results of these experiments that the Fallopian tube contractions which are induced by estrogenic hormone can be inhibited by progesterone.

10015

Assay of a Vitamin K Preparation for Vitamin D.

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Vitamin K preparations have been used as therapeutic measures in the treatment of the bleeding tendency in patients with jaundice.[1, 2, 3] McNealy, Shapiro, and Melnick[4] demonstrated that the administration of Vitamin D (Viosterol) to patients with jaundice leads to a marked decrease in the "venostasis bleeding time."[5] This

* For the Progynon-B and Proluton used in these experiments, we are indebted to Drs. Gregory Stragnell and Erwin Schwenk of the Schering Corporation, Bloomfield, N. J.

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3 Butt, H. R., Snell, A. M., Osterberg, A. E., *Proc. Staff Meetings Mayo Clinic*, 1938, **13**, 74.

4 McNealy, R. W., Shapiro, P. F., and Melnick, P., *Surg. Gynec. and Obst.*, 1935, **60**, 785.

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