

Adenylic acid is one of the vasodepressor substances found in the blood stream.<sup>2</sup> According to Bennet and Drury,<sup>3</sup> 3 mg. of adenylic acid intravenously cause a blood pressure fall of 40 mg. of mercury. Believing that this substance might be capable of producing a gastric secretory response, doses from 1.0 to 10.0 mg. were injected subcutaneously into Pavlov pouch dogs. The gastric response was uniformly negative.

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## Cyclic Variations in Urinary Excretion of Iodine in Women.\*

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While investigating the daily urinary excretion of iodine in patients with goiter, we observed a rise in the urinary output of iodine during the first 2 days of menstruation in one (Fig. 1, B), with non-toxic nodular goiter, and a premenstrual rise in the other (Fig. 1, A), with exophthalmic goiter. Several investigators have reported an increase in the blood iodine during menstruation.<sup>1, 2, 3, 4</sup> It has also been reported that menstrual blood is considerably higher in iodine content than venous blood.<sup>3, 5</sup>

Since the urine was not obtained by catheterization some unavoidable contamination occurred. However, 50 to 100 cc. of menstrual blood would be required to give the increase found during the menstrual period in the patient (B), and blood was not grossly evident in the specimens. To further investigate this cyclic variation, 2 women without evidence of thyroid disease (C and D) were studied throughout the entire menstrual cycle.

During these studies the subjects were allowed a general diet. Care was taken to exclude foods known to be high in iodine content, and particularly sea foods. The ages are as follows: A-18, B-39,

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<sup>2</sup> Zipf, K., *Arch. exp. Path. u. Pharm.*, 1931, **160**, 579.

<sup>3</sup> Bennet, D. W., and Drury, A. N., *J. Physiol.*, 1931, **72**, 288.

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<sup>1</sup> Maurer, F. E., *Archiv. f. Gynäk.*, 1927, **130**, 70.

<sup>2</sup> Jahn, D., and Kesselkaul, O., *Deutsches Arch. f. klin. Med.*, 1928, **161**, 143.

<sup>3</sup> Kesselkaul, O., *Verhandl. d. Gesellsch. f. Inn. Med.*, 1928, **40**, 294.

<sup>4</sup> Scheringer, W., *Arch. f. Gynäk.*, 1930, **143**, 319.

<sup>5</sup> Bourcet, P., *Compt. rend. Acad. d. sc.*, 1900, **131**, 392.

C-27, and D-32. All 4 showed either a premenstrual or menstrual rise in urinary iodine excretion (Fig. 1). Subject C showed the premenstrual rise during 2 consecutive periods. B, C, and D showed a rise 6 to 8 days after the onset of menstruation. A, C, and D presented a rise 14 to 18 days after the onset of menstruation.

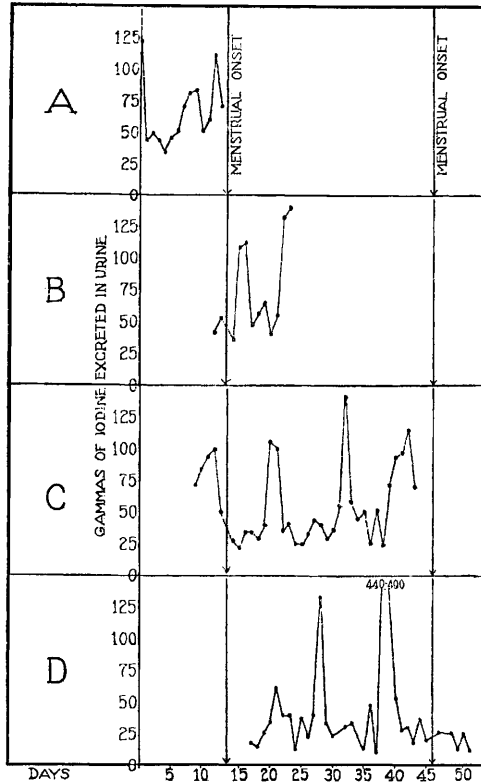


Fig 1 DAILY URINARY EXCRETION OF IODINE IN WOMEN

It will be noted that the variation in the urinary iodine excretion does not parallel that found in the blood iodine by previous workers. At present we are not prepared to discuss the mechanism of this cyclic variation in the urinary excretion of iodine. Further investigation is in progress.