

mals. In all cases the ovulation reactions were normal, thus showing the follicles were capable of ovulating. However, the M.O.D. for atropine-treated animals was higher than normals.

A group of 6 rabbits was treated with pilocarpine (3 mg./kg. and 2 mg./kg.). Ovulation was inhibited with the larger dosage in 3 cases out of 4 after it had acted 18 minutes or longer, but since this dosage approaches the M.L.D. these results may be questioned. No inhibition was obtained in 2 cases on a lower dosage of 2 mg./kg. Physostigmine acts similarly to pilocarpine.

It is of interest to note that even though ovulation occurred in 6 rabbits which copulated within 1-4 minutes after atropine injection no young were born. The same was true of one case treated with 3 mg./kg. of pilocarpine in which ovulation occurred.

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Antuitrin-S Effect upon Blood Elements.*

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Novak¹ has stated that the good results he has obtained from the administration of the anterior pituitary-like hormone (Antuitrin-S) in cases of functional uterine bleeding were possibly due to changes produced in the blood by the action of this substance. To determine the presence or absence of such changes, 6 patients were given Antuitrin-S by hypodermic injection, using 1 cc. 3 times weekly. Three of these were injected for a period of 2 weeks, the other 3 for 3 weeks. Complete blood examinations (involving the formed elements only) were made before the injection of the product was begun, and again after all the injections had been completed. These examinations included the hemoglobin, red blood count, white blood count and differential, platelet count, bleeding time, coagulation time, and tourniquet test. It was felt that comparison of the figures obtained before and after treatment might throw some light upon the effect of Antuitrin-S upon the blood elements, as well as explain any improvement in functional uterine bleeding noted, if dependent on blood changes. The patients selected were all fertile women who

* The authors wish to express their gratitude to Dr. Nathan Rosenthal who carried out the blood examinations.

¹ Novak, E., Hard, G. B., *Am. Gynecological Soc.*, 1931, **56**, 146.

presented no demonstrable abnormalities other than the uterine bleeding.

The study of the results of the injections demonstrated that the effect on the blood was so slight as to be negligible. In most cases there was some drop in the hemoglobin after the administration of the hormone, the greatest difference being 13% and in only 1 case a rise of 4%. The other variations were too unimportant to require comment. It is interesting to note that the platelet count almost uniformly was lower after treatment. This is surprising, if the fact that a reduction in platelets is usually found associated with an increased tendency toward hemorrhage, is accepted. As has been reported elsewhere, we have not been able to obtain cessation of bleeding in cases of functional metorrhagia with large doses of Antuitrin-S. It is needless to add that the patients studied in the above series showed no improvement from the standpoint of the bleeding. The continued bleeding may even explain the uniformity in diminution of the hemoglobin.

From the above studies we concluded the injections of Antuitrin-S did not affect the formed blood elements.

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Basic Amino Acids Yielded by Thyroglobulin.*

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The present analysis of thyroglobulin was undertaken in order to obtain information by modern isolation methods regarding its basic amino acid composition. The preparation‡ was made by the method of Barnes¹; the low phosphorus content (Table I) indicates that little impurity of a nucleoprotein nature could have been present. The iodine content is slightly higher than that reported by Heidelberger and Palmer² but is considerably lower than Oswald³

* Grateful acknowledgement is made to Dr. H. B. Vickery for aid in the preparation of this manuscript.

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‡ This sample of thyroglobulin was generously furnished by Dr. B. O. Barnes, of the Department of Physiology, University of Chicago; the protein was prepared from hog thyroids.

¹ Barnes, B. O., *Proc. Soc. Exp. Biol. and Med.*, 1931, **29**, 680.

² Heidelberger, M., and Palmer, W. W., *J. Biol. Chem.*, 1933, **101**, 433.

³ Oswald, A., *Z. physiol. Chem.*, 1899, **27**, 14; 1901, **32**, 121.