

level of about 75% of normal. Other cell types seemed to be unaffected.

These results were exactly opposite to the author's findings (unpublished) with amidopyrine and other cyclic drugs. Climenko² reports inhibition of leucogenic activity in the rabbit by certain cyclic compounds.

Conclusions. 1. The injection of a single dose of sodium amytal into albino rats caused a slight leukopenia 2 hours later, followed by a decided leucocytosis whose peak was reached at from 5 to 11 hours after injection. 2. The leucocytosis was caused by an increase in polymorphonuclear neutrophils. 3. All counts returned to a level slightly above normal in from 11 to 19 hours.

8267 P

Oophorectomy and Maintenance of Pregnancy in the Rat.

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It is generally agreed that removal of the ovaries during pregnancy, in the rat, invariably results in the untimely interruption of this condition.¹⁻⁴ Evidence is presented in this report, however, which demonstrates that under certain experimental conditions this rule does not hold, and that the rat may carry through to term during the latter part of pregnancy in the entire absence of ovarian tissue.

Adult female rats were subjected to unilateral resection of a Fallopian tube, to insure an initial litter size reduction. This was followed by exactly time mating. Laparotomy, performed on the 12th or 13th day of pregnancy, involved removal of one ovary and of fetuses in the fertile horn in excess of one. Foetal removal was so effected as to leave the placentae intact and *in situ*. Two days later in each instance the remaining ovary was ablated. Of 10 animals used in this series all carried to term, but failed to deliver, and the

² Climenko, *Proc. Soc. Exp. Biol. and Med.*, 1935, **32**, 823.

¹ Hain, A. M., *Q. J. Exp. Physiol.*, 1934, **24**, 101.

² Johnson, G. E., and Challans, J. C., *Anat. Rec.*, 1930, **39**, 195.

³ Nelson, W. O., and Haterius, H. O., *Physiol. Zool.*, 1930, **3**, 300.

⁴ Selye, H., Collip, J. B., and Thomson, D. L., *Endocrinol.*, 1935, **19**, 151.

young were recovered alive after being allowed to remain *in utero* for one and 2 days past the expected date of parturition. Placentae, including those of previously removed foetuses, were viable and healthy.

A second group of 10 females was subjected to precisely the same treatment, with the exception that the 'extra' placentae were included in the surgical removal of foetuses on the 12th or 13th day. Following removal of the second ovary none carried to term. Autopsy on the expected date of delivery revealed markedly involuted uteri containing no indications of embryonic substance. A control group of 11 animals, treated in the same manner with the exception that the second ovary was not extirpated, carried through successfully, and normal delivery occurred in each instance at the expected time.

In the rat, therefore, the ovaries are not essential for the maintenance of pregnancy at least during the last third, providing (1) only one foetus is being carried, and (2) sufficient viable placental tissue is present. The birth mechanism, under conditions of the experiments, is inhibited.

These results, to be considered *in extenso* elsewhere, indicate that the placenta may supply progestin, and hence may serve in an auxiliary capacity to the ovaries. It is suggested that the degree of development of this auxiliary capacity may determine the relative freedom from dependence upon ovarian support encountered in certain mammals.

8268 C

Sex Reversal in Amblystoma. VIII. Sex Type of Gonads Developed from Gonadic Preprimordia of *A. punctatum* Implanted in Axolotl Females.*

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The writer¹ and Burns,² using different technical methods, have demonstrated that the testis (or potential testis) of *A. punctatum* (*maculatum*) may undergo reversal or transformation to an ovary

* Material obtained through the kindness of Dr. Cranford Hutchinson and the Morris Biological Farm of the Wistar Institute.

¹ Humphrey, R. R., *Anat. Rec.*, 1935, **62**, 223.

² Burns, R. K., Jr., *Anat. Rec.*, 1935, **63**, 101.