hospitals where these drugs have been given for years should be of value on this point.

It may be that only in exceptional cases of myeloid leukemia would luminal and amidopyrine have the effects we have seen in our patient. On the other hand a series of cases may disclose some peculiarity of the same order in the victims of myeloid leukemia and in those apparently normal persons who are so remarkably affected by the drugs under consideration.

7479 P

Effect of Urine of Castrate Women on the Female Guinea Pig.

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The failure of pregnancy urine to produce morphological changes in the ovaries of guinea pigs similar to those produced in rats has been recognized by Jares,[1] and Selye *et al.*[2] In view of the recent discovery that the hormone in the urine of castrate women is different from that in pregnancy urine when tested on hypophysectomized female rats (Leonard and Smith[3]), it seemed of interest to compare their effects on the female guinea pig.

Five guinea pigs ranging from 120 to 250 gm. in weight were injected subcutaneously for 5 to 8 days with an extract of urine of a castrate woman.* The amounts used, based on the equivalents of whole urine, varied from 150 cc. to 400 cc. For controls, either one ovary was removed before treatment was begun (3 cases) or comparisons were made with the ovaries of uninjected pigs of similar size. (2 cases.) Two other guinea pigs were treated with 100 R.U. and 500 R.U. of pregnancy urine extract. The ovaries, thyroids, adrenals and uterus were weighed at autopsy and the ovaries were sectioned for further study.

In all cases, the ovaries of the animals receiving the urine of castrate women increased in size and showed very marked follicular development. For example, in 3 young guinea pigs, the control

[1] Jares, *Anat. Rec.*, 1931, **49**, 185.

[2] Selye *et al.*, PROC. SOC. EXP. BIOL. AND MED., 1933, **30**, 780.

[3] Leonard and Smith, PROC. SOC. EXP. BIOL. AND MED., 1933, **31**, 283.

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ovaries weighed 29.6 mg., those of the animal receiving 200 cc. equivalent of urine weighed 39.6 mg., and those of the animal receiving 400 cc. equivalent weighed 80.3 mg.

The uteri in all cases were markedly enlarged and the vaginas were open. In the ovaries of the largest animal, corpora lutea were found, none being present in the controls. Thyroids and adrenals were not significantly increased in size.

These results, while not based on a large number of animals, were all consistent in producing the follicular stimulating effect which is characteristic of such urines and is in marked contrast to the effects of pregnancy urine. The guinea pig, like the hypophysectomized rat, can be used qualitatively to differentiate the urinary gonadotropic hormones.

7480 P

Studies on Ovarian Inhibiting Action of Certain Pituitary Extracts.

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It has been amply demonstrated that hypophyseal extracts containing the growth principle will prevent the gonad-stimulating action of hypophyseal or pregnancy urine extracts in immature or hypophysectomized rats (Smith, Evans, Reiss and Leonard). This inhibitory action was first ascribed by Evans and his coworkers to the growth hormone but later work led them to abandon their original thesis. Investigations along similar lines also indicated that the growth hormone is not the antagonistic principle. Results obtained on the study of this reaction constitute this report.

Sexually immature female rats were given 10 R.U. of pregnancy urine extract (Antuitrin S)† subcutaneously, which approximately doubled the weights of the ovaries in 5 days. Littermates which were concurrently injected with pregnancy urine and extracts of beef and sheep pituitaries containing growth hormone (doses 1 cc. to 5 cc.) prepared after the method of Van Dyke,[1] failed to show

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1 Van Dyke, *J. Pharm. Exp. Therap.*, 1930, **40**, 413.