periportal connective tissue, splenic septa, as well as in the media of small arterioles of the lungs. In the lung such vessels occasionally presented the appearance of obliterative endarteritis. While it is impossible to exclude such contributory factors as may be supplied by spontaneous infections in the development of these vascular changes we feel such changes are to be interpreted primarily as alterations in the colloidal state of the collagen due to lack of vitamin C as postulated by Wolbach and Howe.[16] The other lesions noted were less constant. Patches of degenerating intestinal mucosa formed the basis of the ulcerated areas seen in the gross, mostly in the small gut. In the spleen no characteristic scorbutic changes were observed unless one considers the brown hemolyzed intra and extra cellular pigment as such. The presence of occasional hydropic degeneration of the islets of Langerhans was probably only an indication of spontaneous intestinal infection.[17]

Summary. The most characteristic lesion found in the organs of scorbutic guinea pigs was the depletion of fat and cholesterol from the cortex of the adrenal. Fatty degeneration of the myocardium, marked degeneration of testicular germinal epithelium and spermatozoa and swelling of connective tissue were also observed in extreme scurvy.

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Chemical Determination of Pregnancy.

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We have found that a fair degree of accuracy can be obtained in testing for pregnancy by oxidizing 1 cc. of urine with 1 drop of 0.5% hydrogen peroxide, after which 5 drops of a 1% aqueous solution of phenylhydrazine hydrochloride are added and 5 drops of a 5% aqueous solution of methyl cyanide, followed by 5 drops of concentrated hydrochloric acid. It is then put into a boiling water bath and allowed to react for 25 minutes. After this time the reaction is said to be positive if a russet color develops and a flocculent precipitate appears. A negative reaction is shown by the absence of

[16] Wolbach, S. B., and Howe, P. R., *Arch. Path.*, 1926, **1**, 1.

[17] Thomas, B. G. H., *J. Infect. Dis.*, 1924, **35**, 407.

a precipitate or the presence of a powdery one and usually a straw color. All reagents should be fresh at the time the tests are made.

It was found that a modification of this test, which appears to be more sensitive for certain of the hormones, could be adapted to titration methods. This modification is carried out as follows:

To 1 cc. of urine, one drop of 0.5% hydrogen peroxide is added and this allowed to stand for 3 minutes. Five drops of a 1% solution of phenylhydrazine hydrochloride are added, followed by 5 drops of a 5% aqueous solution of potassium ferricyanide. This is allowed to stand for 10 minutes at room temperature and then put in a boiling water bath for 15 minutes. Upon removal from the water bath, one drop of concentrated hydrochloric acid is added and this is followed by an excess of sodium hydroxide. Dilute hydrochloric acid is then added by titration until a definite end point is obtained. (The color changes from an orange to a green to a prussian blue.) It was found that it required much less dilute hydrochloric acid to obtain the end point in pregnancy specimens than was required in the case of non-pregnancy female urine specimens, and that various pregnancy tests fall in a given range, while normal tests fall in another more restricted range.

Total number of established cases tested	317
Number correct	295
% of accuracy (approx.)	93

In addition to the cases of normal pregnancy, we have had opportunity to study a limited number of irregular cases with significant results.

At the time of the writing of this report, 40 tests have been made on portions of specimens used for the Aschheim-Zondek test for pregnancy. Of this number, 33 gave the same results in both tests. Three gave a very faint positive test by the chemical method, but negative by the Aschheim-Zondek; one gave a negative test by our method and a positive reaction with a rabbit, but was found by operation to be a uterine fibroid growth. The remaining 3 tests did not agree but have not yet been determined clinically. Three doubtful cases were tested and compared with results of the Friedman test. Agreement was obtained in all.