8992 P

Retardation of the Gall Bladder in Pregnancy.

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Following Mann and Higgins' pioneer study of the effect of pregnancy upon the emptying of the gall bladder in gophers,[1] several attempts have been made to appraise the efficiency of this organ in gravid women, but with contradictory results. The latter may be attributed to difficulties inherent in visualizing the gall bladder of pregnancy, to lack of quantitative methods of measuring the flow of bile and to absence of post-partum examination of individuals selected for study.

The present analysis is based upon intravenous cholecystography and upon computation of the changing volumes of the gall bladder after a standard meal.[2] During the last 2 years 21 gravid women have been subjected to this test. Curiously enough, in view of some of the reports in the literature, the gall bladder of only one of these failed to visualize. Three other series were discarded because of gall stones, vomiting or unsatisfactory shadows. Of the remaining 17 patients, 4 had been gravid 2 to 3 months, and thirteen 5 to 8 months. Five of the latter were also visualized post-partum.

Inspection of the mean curves of evacuation of the gall bladder in these groups shows that in the 13 women 5 to 8 months gravid (most of them primigravidae) only half the contents of the gall bladder had been discharged 40 minutes post-cibum, whereas in 12 nulligravidae of comparable age[3] nearly three-fourths of the contents had been emptied (Fig. 1). This retardation is even more striking when the gravid and post-partum curves of 5 of these individuals are compared. During pregnancy these 5 gall bladders discharged only 8% of their volume in the first 20 minutes post-cibum, whereas 6 to 9 weeks post-partum the same organs discharged 48%. It is not surprising, therefore, that Potter should have found that 75% of normal gall bladders during pregnancy are distended.[4]

The explanation for this partial stasis, with its accompanying increase in the concentration of bile constituents and its disturbance

* Aided by grants from the Medical Research Funds of the Graduate School.

1 Mann, Frank C., and Higgins, George M., *Arch. Surg.*, 1927, **15**, 552.

2 For methods, see Boyden, E. A., *Anat. Rec.*, 1928, **40**, 147.

3 Boyden, E. A., and Fuller, Alice H., *Am. J. Dis. Child.*, 1934, **48**, 565.

4 Potter, Milton G., *J. A. M. A.*, 1936, **106**, 1070.

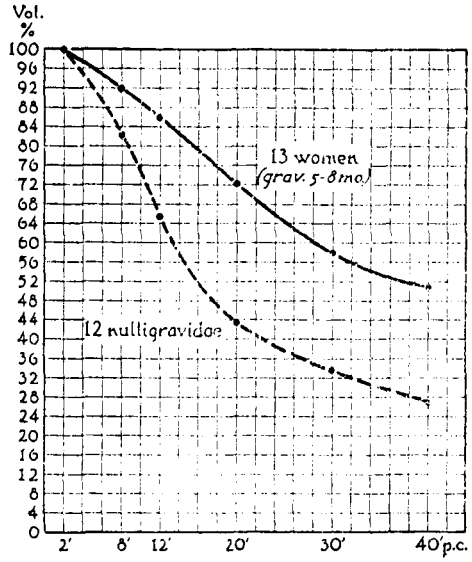

FIG. 1.

Mean curves of evacuation of gall bladder, after a standard meal of 4 egg yolks mixed in an equal volume of milk.

of bile salt-cholesterol ratios[4] cannot be adequately discussed within the limits of this preliminary article. Suffice it to say that Westphal's pilocarpine experiments on pregnant women,[5] pointing to a hypermotility of the Sphincter of Oddi during pregnancy, seems to afford the most promising line of investigation. Just when this delay in emptying becomes recognizable has not yet been determined. In the 4 individuals who were pregnant only 2 to 3 months the mean curve of evacuation of bile was only a little slower than normal—a difference that was not statistically significant.

8993 C

Kinetics of Muscle Atrophy in Different Species.

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It has long been known that when skeletal muscle of homotherms is denervated, an atrophy ensues. The muscle undergoes a progressive loss of weight which is directly proportional to lapse of time after denervation. Quantitative data concerning the percent

5 Westphal, Karl, *Z. f. Klin. Med.*, 1923, **96**, 95.