added, however, that tests on several cases of hemophilia have shown that the blood vessels are not affected in this disease, and that the blood does not permeate the vessel wall when subjected to this amount of increased pressure.

81 (898)

A note on the retention in the blood of uric acid and creatinine in the uremic type of nephritis.[1]

By V. C. MYERS and M. S. FINE.

[*From the Laboratory of Pathological Chemistry, New York Post-Graduate Medical School and Hospital.*]

In two cases of nephritis of the uremic type with high non-protein nitrogen and urea, very high figures for both uric acid and creatinine have been observed. The increase in the concentration of these substances is best shown in tabular form. The figures are in mgm. per 100 c.c. of blood.

Case.	Date.	Non-protein N.	Urea N.	Uric Acid.	Creatinine.	Creatine and Creatinine.
1	Mar. 7	292	200	10.5	....	....
				11.0	9.0	15.0
	Mar. 9	207	182	11.4	16.6	....
2	May 4	...	...	6.1	....	....
	May 7	155	120	8.0	10.0	16.0
	May 13 a.m.	184	140	13.7	13.9	17.2
	May 13 p.m.	226	170	14.0	14.7	27.8

The progressive increase in the various constituents as the condition approaches a fatal termination is well shown in Case 2. Attention is called to the possible etiological importance of the retention of creatinine on account of its containing the toxic guanidine group, also to the probable diagnostic and prognostic value of the determinations for uric acid and creatinine in this con-

[1] After the title of our communication was submitted, papers appeared by O. Neubauer, *Münch. med. Wochenschr.*, (Apr. 21) 1914; LXI, p. 857, and by Folin and Denis, *Journ. Biol. Chem.*, (May) 1914, XVII, p. 487, reporting somewhat similar observations. Neubauer records one case of uremia with marked retention of creatinine in the blood, while Folin and Denis present ten cases of uremia with analyses of uric acid, creatinine together with the other nitrogenous constituents.

dition. The possible etiological bearing of the retention of creatinine is being considered from the standpoint of experimental nephritis.

Estimations of total solids, total nitrogen, chlorides, sugar, and cholesterol have been made in all our cases in addition to the above determinations. In our earlier estimations of creatinine, Shaffer's suggestions for the estimation of creatinine in dilute solutions were followed, but recently we have employed Folin's new method which has been found very satisfactory.

82 (899)

The significance of the non-protein nitrogen of the blood in experimental uranium nephritis.

By HERMAN O. MOSENTHAL.

[*From the Department of Medicine and the Laboratory of Biochemistry, Columbia University.*]

The increase in the non-protein nitrogen content of the blood in the experimental uranium nephritis of dogs may be due to:

1. *Diminished secretory activity of the kidney.* This is undoubtedly the case in those instances of severe nephritis in which the urinary nitrogen is diminished.

2. *Increased protein catabolism.* In poisonings of less intensity but sufficient to produce a nephritis of considerable severity as indicated by the albuminuria, there may be an increased amount of nitrogen in the urine as compared to the intake. In these instances the amount of non-protein nitrogen in the blood rises considerably. Such an increase, not being due to nitrogen retention on the part of the kidney, may be ascribed to an increased protein catabolism.

3. *Inspissation of the blood.* A polyuria, resulting in loss of water to the animal in this form of nephritis, may cause an apparent rise in the non-protein nitrogen of the blood.

4. *The chemical combination in which the non-protein nitrogen of the blood exists.* Animals with a certain degree of uranium nephritis are capable of putting out extremely high amounts of nitrogen in the urine. (A dog of 15 kilos daily eliminated 23 gm.