

Dominion Medical Monthly

EDITORS:

W. H. B. AIKINS, M.D.

W. B. NESBITT, B.A., M.D.,

WITH THE ACTIVE COLLABORATION OF

A. B. ATHERTON, M.D.

J. J. CASSIDY, M.D.

A. A. MACDONALD, M.D.

J. H. BURNS, M.D.

J. FERGUSON, M.D.

G. S. RYERSON, M.D.

VOL. I.] TORONTO, ONT., SEPTEMBER, 1893. [No. 3.

ORIGINAL ARTICLES.

(No paper published or to be published elsewhere as original, will be accepted in this department.)

URIC ACID IN THE BLOOD.

BY JOHN FERGUSON, M.A., M.D., TORONTO.

The most extensive investigations show without a shadow of doubt that that amount of urea formed in the system daily, and eliminated from it, varies with the diet and the healthy condition of the excretories. It will be readily granted that 1,000 days is a fairly lengthy trial. Making use of Charteris' ureameter, and testing my own urine for the above period, I found that the total amount of urea eliminated was 363,458 grains, or a daily elimination of 363 grains. During the same daily tests, using Haycraft's and other methods, I found that the daily elimination of uric acid was eleven grains. On many days the collection, for the entire twenty-four hours, was used; on other days, the calculation was made from samples, and estimated for the entire day. Knowing the average amount of urine voided daily, I found that the days on which I estimated from samples, corresponded very closely with those when I had used the entire day's collection. The results may be taken therefore as practically accurate.

The researches of several careful observers, including Berlioz, Lecanu, Duckworth, Garrod, Haig, Haycraft, Laudois, Heidenhain and myself, prove beyond any doubt that the formation of uric acid is in the ratio of one to thirty-three of urea. Now note carefully that I say formation, and not elimination. The formation of uric acid to urea may go on in the proportion of one to thirty-three, and the elimination not hold this ratio. This may be caused by a number of conditions that hold back in the system some of the daily formation of the uric acid. This quantity, held back, is stored up within the system.

If, for any given period, the elimination of uric acid stands to the urea as one to forty, there is a retention of some of the uric acid formed. If, on the other hand, the uric acid eliminated in any period should be, to the urea, one to twenty, there is an elimination going on in excess of the daily formation; and this excess must come from