

## THE EFFECTS OF EXPERIMENTAL CHRONIC PASSIVE CONGESTION ON RENAL FUNCTION\*

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By experimental methods, the production of varying grades of chronic passive congestion of the kidney has been attempted in order to determine its effect on the urinary and clinical findings, on the excretory capacity of the kidney as revealed by certain functional studies and on the histological structure of the kidney.

In every cardiorenal case which he encounters the physician confronts problems which he is called on to solve. Is the heart or kidney chiefly involved in this case? Which is more responsible for the clinical picture here exhibited? Do permanent and irreparable organic changes exist in the kidneys which preclude the hope of reestablishing a condition of relatively good health, or will the decreased renal function return to normal with the improvement in the cardiovascular system consequent on the enforced confinement to bed? Can chronic passive congestion alone be responsible for the clinical findings? Shall the treatment be directed chiefly to the heart or to the kidneys? Can chronic passive congestion itself interfere to any considerable degree with the excreting capacity of the kidney or can it *per se* institute pathological processes which result in organic and irreparable changes which decrease the capability of the kidney to carry on its work?

By correlating the data obtained from this study with those obtained by utilizing clinically these identical functional tests in a rather extensive series of cardiac, cardiorenal and renal cases, we have attempted to devise some means whereby these problems can be successfully attacked.

### HISTORICAL

The effect of partial or complete obstruction to the venous return from the kidney on the urinary picture and the histology of the kidney has been already investigated. Robinson<sup>1</sup> (1843) showed that complete or partial tying off of the renal vein resulted in the appearance of albumin

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1. Robinson: Med. Chir. Tr., 1843, xxvi, 51.