

PRELIMINARY REPORT UPON THE USE OF INDIGOCARMININE INTRAVENOUSLY AS A TEST OF THE RENAL FUNCTION

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THERE is no doubt as to the value of indigocarmine in estimating renal function. In my hands its chief use has been in determining the relative sufficiency of the kidneys after making a total estimate with phenolsulphonephthalein. The great drawback has been the pain attendant upon the intramuscular injection of the 20 cc. of the 0.4 per cent solution, and even when we prevented this by the previous use of a local anæsthetic, there would be soreness and lameness of the muscles into which the solution was placed. Another objection is the variable time of appearance of the drug in the urine, consequent upon the variable time of its absorption.

To obviate the above difficulties, I recently began the use of the drug intravenously in a strength of 0.3 per cent and in amounts varying

from 5 to 10 cc. I have seen no difference in the time of appearance whether I used 5 or 10 cc. The beginning of elimination has been noted by observing the ureteral orifices through the cystoscope, and this has ranged from two to six minutes, with an average of three and a half. While I have as yet made no estimate of the amount eliminated in a given time, I have noted that the larger part is excreted in the first fifteen or twenty minutes, as after this time the color of the drug has almost entirely disappeared.

No local pain nor systemic disturbance has been noted.

One of the cases in which we have used the indigocarmine both intramuscularly and intravenously, and have also a phenolsulphonephthalein estimate, is of interest: 20 cc. 0.4 per cent sol indigocarmine intramuscularly, appearance

19 min.; 6 cc. 0.3 per cent sol indigocarmine intravenously, appearance $2\frac{1}{2}$ min.; .06 gr. phenol-sulphonephthalein intravenously, in first 15 minutes 60 per cent.

Had I depended upon the first test, I would have been led to believe there was some degree of renal insufficiency.

More cases will be studied, taking into consideration the amount of the drug needed for best results, the time of appearance, the percentage of elimination in a given time, and the dura-

tion of excretion. Using the same patients a comparison will be made with tests with phenol-sulphonephthalein.

While the number of cases in which I have used this is not yet large, I consider the intravenous method of administration preferable to the intramuscular method in being less objectionable to the patient, and in giving more satisfactory and more uniform results by eliminating the factor of a variable time of absorption from the muscles.
