

to 60 per cent. (average 50 per cent.) being excreted in the first hour after its appearance in the urine, and 60 to 85 per cent for two hours. In health the elimination is practically completed in two hours, only a trace being present during the third and fourth hours.

Recently intramuscular (lumbar) and intravenous injections have been employed. The time of appearance following the intramuscular administration is practically the same as that after the subcutaneous, but the output averages 5-10 per cent. more for the first hour, while the range of variation in excretion in normal cases has been less owing to more rapid and more even absorption. Following the intravenous injection, the drug normally appears in from 3 to 5 minutes, and from 50 to 65 per cent. of the drug is eliminated in the first half hour, and 63 to 80 per cent. during the first hour. This rapidity of the excretion following intravenous administration is exceedingly striking, and when this method is employed, observations for half an hour only should be employed. In connection with ureteral catheterization this is a matter of great importance, as prolonged ureteral catheterization may be a matter of great discomfort to the patient. For general use, however, we advocate the subcutaneous or intramuscular method (the latter particularly when oedema is present), as the technique involved is much simpler and the results obtained are sufficiently reliable. The technique of the test is exceedingly simple. The injection is given, time of appearance noted, and collection of urine made for one or two hours. To each sample sufficient sodium hydrate is added to insure alkalinity and maximum intensity of color; then the urine is diluted to 1 liter, a small amount is filtered, the reading made, and percentage of drug excreted is calculated.

INFLUENCE OF AMOUNT OF URINARY SECRETION.

The excretion of the drug does not run parallel to the excretion of urine. It is immaterial as far as the excretion of the drug is concerned whether the urinary output is 50, 200, 400 or 500 c.c. Similarly the output does not seem to be much influenced by the previous administration of the different diuretics. Experimentally in animals it has been ascertained that some diuretics slightly decrease, while others slightly increase the excretion in striking contrast to the effect of these diuretics on the water output.

THE STUDY OF NEPHRITIS.

Heretofore functional tests have not been considered of any great value to the clinician in relation to nephritis. In fact hyperpermeability to methylene blue, indigo-carmin and rosoline has been shown to exist in acute and in chronic parenchymatous nephritis, while on the other