

greater than that of the combined function of the two kidneys prior to surgical interference. The amount of increase function that will develop can of course not be predicted from functional studies, but the increase after nephrectomy can be determined from day to day and so aid in prognosis.

A perfectly normal urine in every respect except quantity may be excreted by a congenitally deficient type of kidney. Such a kidney may be capable of doing only one-fifth to one-tenth of the total work required. The literature furnishes numbers of instances of death following a nephrectomy, owing to the presence of this unrecognized deficient kidney, which has been left to do all the work. In the last four years of our experience, four such cases have been encountered, and in the last case only, the presence of a low phthalein from this kidney revealed its true nature and prevented the removal, on the opposite side, of a tuberculous kidney which had many times a greater function than this supposedly healthy kidney. Had the nephrectomy been performed, the prognosis would have been extremely grave.

In certain cases, owing to malformation or stricture in the lower end of the ureters, and especially in bladder tuberculosis, it may be possible only to catheterize one ureter. When infection of the bladder exists, microscopical and chemical examination of the urine collected transvesically is obviously unreliable as indicating a healthy or diseased condition of the uncatheterized side. It is therefore necessary to use functional tests to determine the presence or absence of disease and the extent of the disease where it does exist. A prognosis may be safely made concerning the ability of any kidney to carry on the renal function alone, even when catheterization of the ureter is impossible, and where the urine has been collected through a diseased infected bladder, provided a catheter can be inserted into the other ureter. The use of these tests should not be limited to renal surgery, since their routine employment would undoubtedly influence the surgeon's attitude in many instances.

*Uremia.* Uremia is a clinical condition, a syndrome, resulting from renal insufficiency from any cause. Its appearance is often sudden and unexpected, its course, acute and severe, rapidly ending in death, or chronic, lasting through months. Through functional studies it is possible to ascertain that it is impending, even when no indications whatever of its proximity are revealed by the clinical study. With a continued failure on the part of the kidney to excrete