retracted to the posterior part of the bladder in the neighborhood of the vesical cornua, and it is often circular or gaping, or appears set in a little pocket ("golf-hole" orifice—Fenwick), and often too, some pus can be seen escaping. The attempt to catheterize the orifice through the open cystoscope may be easy, or in the advanced cases may show a distinct stricture of the ureter due to the infiltration and crowding together of its walls. When once the catheter has passed the obstruction, if any of the secretions are backed up, they may then escape freely by its lumen, or on entering the pelvis of the kidney, a considerable quantity of pus may flow off. The catheter thus introduced may be left *in situ* several hours, if necessary, in order to secure sufficient secretion for examination.

With the demonstration of the infection of the kidney the examination has in reality only entered upon its first stages. It is absolutely essential to determine at the same time the exact condition of the other kidney. This may be done if the bladder is not ulcerated, while the ureteral catheter is collecting urine from the diseased side, by introducing an ordinary catheter into the bladder, which has been previously washed out, and collecting the urine from the bladder during this period, and letting this represent the uncatheterized kidney. If this urine is in all respects normal, it may be accepted as satisfactory. If it is abnormal, the examiner may then proceed to catheterize the opposite kidney. I do not feel the slightest hesitation in doing this through my open cystoscope after cleansing the lumen of the instrument and carefully wiping off the ureteral orifices. This procedure is advocated as free from danger by many eminent surgeons operating through a bladder distended with fluid. If it is safe under these conditions, is it safer through the open air distended bladder.

In doubtful cases, where after days of search in an acid pyuria, no tubercle bacilli have been found, it is of the utmost value to inject two guinea-pigs, one intraperitoneally and the other subcutaneously in the flank with the fresh sediment of urine. It is sometimes well to secure the sediment from a twenty-four hours' specimen to centrifugalize, and to wash it, and then to inject. Casper recommends giving the guinea-pig a dose of tuberculin in advance in order to test whether or not it is tubercular beforehand, thus obviating a serious and manifest source of error.

Cryoscopy, both of blood and urine, are of value as showing the functional value of two kidneys and of each separately.

I have made some use of cryoscopy, but have found our