

case of a normal kidney in 15 to 30 minutes after taking the drug by the mouth. If we have to wait 60 minutes or longer before one ureter emits tinged urine, then we know there is disease on that side. (Ackard & Castaigne, 1897).

Vulcher & Joseph, inject 16 centigrammes of indigo-carmin into the gluteal muscles, and in normal cases, the urine is tinged purple in 15 to 30 minutes. They state that this drug is excreted entirely by the kidneys and is harmless.

In their latest report (1904), Hofmeyer agrees with their views and the advantages of chromo-cystoscopy are stated as follows:—

- (1) Intensity of the color is seen to vary.
- (2) Ureteral whirl may be seen going down towards the base of bladder or upwards, indicating a difference in the specific gravity.
- (3) The opening of ureter may be covered with ulcerations and the only way to find the orifice is to watch for the colored spurt coming out.

The same authors give iodide of potassium by the mouth and fill the bladder with a weak solution of peroxide of hydrogen, containing starch. The urinary spurt becomes bluish as soon as potassium iodide begins to be excreted. These tests aid us in determining whether the kidneys are functioning properly or not.

It is evident, however, that if the urine can be obtained separately from each kidney, without being contaminated by pathological elements coming from the ureters, bladder or urethra diagnosis will be less difficult. There are two methods of accomplishing this, viz., ureteral catheterization and segregation. It is unnecessary at this time to discuss the instruments used for catheterization of ureters, their mode of sterilization, application, etc. Some prefer water dilatation of the bladder and others the air dilatation. From my brief experience in the work, I prefer the water dilatation and the use of a Brenner, or a somewhat similar cystoscope with a lens system, permitting exact and direct images. No matter what instrument is used, all of us will fail at times to catheterize the ureters. Ureteral catheterization is becoming more popular, but at the same time requires much skill and patience. Very few, if any, authentic cases of infection of the ureters follow catheterization. The catheters may become plugged with blood, etc., preventing the collection of urine. Ureteral catheters spoil readily, making the method expensive.

Segregation has for its object the collecting of the urine from each kidney separately without the use of ureteral catheterization. The principle of the segregator perfected by Neumann, Harris and Down, is to raise the centre of the posterior wall of the bladder up, with the aid