

of an elevator in the rectum or vagina, and then draw off the urine with catheters, separately, from the divided parts.

Luys and Cathelin have designed an intra-vesical segregator, which divides the bladder into two halves, by the use of a thin rubber membrane, stretched over a spiral spring. Keen has used this kind with success.

Harris says, however: "After quite an extensive experience with the segregator, I can state that its intelligent use in suitable cases furnishes results which are reliable and gratifying. It should be used in connection with the cystoscope."

Segregation does not supplant entirely catheterization of the ureters, as there are cases in which the latter is more suitable, but that it does have a very useful field is certain. As many of the diseases of the kidneys require surgical operations for their cure, or even that one of the organs be sacrificed entirely, the necessity in the latter case of being able to estimate the functional capacity of the remaining organ became at once apparent, for upon this point depends the life or death of the patient.

Before the days of ureteral catheterization and the segregator, the determination of this point was practically beyond our power, unless we opened the peritoneum for digital examination of both kidneys, but now by an examination of the separate urines, we are able to determine the amount of work done by each organ with almost mathematical precision. In order to do this, it is necessary to take into consideration, when examining the urines, the time occupied in their collection, the amount collected from each side, the body weight of the patient, the diet and the amount of solids, such as urica, chlorides, etc.

Some of the objections to segregation are:—

- (1) There may be ulceration of bladder and urine is contaminated.
- (2) Segregators cannot be used when the bladder is much contracted, when bladder tumors of any size exist, or when the prostate is much enlarged.
- (3) The Segregator cannot be left in much over an hour.
- (4) The ureteral openings are usually close to the median line. Kümmell tells of a case where the right kidney had been removed and yet with Luys' Segregator, the urine escaped from the right side.

Albarran, lately made a number of comparative examinations on the kidneys of dogs, and found the left kidney 15 to 20 grammes heavier than the right. He says that the longer the urine was collected from each kidney, the less the difference, and from a study of the anatomy,