

tant to the mucous membrane; and further by affecting the circulations in a bladder wall compelled to abnormal action because of the undue resistance that it has to overcome in forcing the stream through a more or less contracted, unyielding and inelastic tube. Because of the ready removal of the condition which produces the cystitis associated with stone or stricture, such cases of chronic inflammation of the bladder, if they have not existed so long as to have become complicated with lesions of the kidney, can be cured with comparative ease.

It stands to reason that if the inflammation is excited, maintained or aggravated by the irritant character of the urine, just in proportion as such is lessened will the morbid state be diminished; and this can be effected in no slight degree by increasing the amount of urine passing through the bladder. To such flushing of the cavity, distributing and carrying away the sedimentary mucus and pus, is due the favorable effects of the administration of large quantities of water, either any ordinary soft water or that obtained in a state of great purity from certain springs.

Some of the infusions owe a part at least of their reputations to the good effect of the cleansing of the bladder by the increased amount of urine passing through. For like reasons, washing out the bladder by injection acts beneficially, provided it is properly done, and with a suitable fluid. The instruments must be clean, in the fullest surgical sense of the word, the fluid warm and such as to arrest and prevent decomposition. Theoretically the weak sublimate solution is the best that can be employed, but practically it is found not infrequently to be badly borne, even when of strength of not more than one part in 6, 7 or 8,000. As good a solution as can be used is, in many cases, that of boracic acid of strength of 3 ss—3 j to the pint of water. Care must always be taken not to throw in the fluid too rapidly or too strongly, and if a single current catheter is used not to over-distend the bladder.

In elderly men an existing cystitis, if neither stone nor stricture is present, almost always depends upon enlargement of the prostate, in a small proportion of cases confined to the third lobe. Such enlargement acts as a stricture does, producing the same condition of the urine and of the bladder wall. In the earlier stages and the milder degrees the indications for treatment are very clear. Systematically, at regular intervals, the bladder must be completely emptied, and that with the least possible effort to the patient—in other words, catheterization should be made and natural evacuation altogether suspended: suspended, not abandoned, for not infrequently after steady use of the catheter for many months or years patients may without resulting ill effects permanently lay aside the instrument. As a rule though, the subject of prostatic hypertrophy in amount sufficient to produce notable effects upon the bladder and the urine should make up his mind to uniformly employ the catheter

during the rest of his lifetime; the soft instrument preferably, and always properly disinfected. In very many cases the chemical changes in the urine are due to bacteria, carried in on the catheter; and it is because of the germs thus introduced that the frequent use of the instrument has long been recognized as likely to be, if not certain to be, followed by putrefactive changes in the urine and an aggravation of the symptoms.

In the older and severer cases, when the general hypertrophy of the prostate is marked, the basfond of the bladder consequently deep, the residual urine in decided amount and alkaline in reaction, catheterization and antiseptic irrigation are the essentials of treatment; attention to which, together with due regulation of the general habits of life, will ordinarily keep the patient in a state of comparative comfort. Even when the muscular coat has been so enfeebled as to permit of over-distension and of long retention with its usually associated and resulting incontinence, the same method of treatment steadily maintained for months will, if there has not been too much damage done the kidney, produce marked improvement in the local and general state. But oftentimes the bladder, instead of being over tolerant, is excessively intolerant of fluid, the presence of a very moderate quantity of which is sufficient to excite a spasmodic painful, imperious desire to urinate. This condition may be associated with and dependent upon prostatic hypertrophy, very apt to be of the ball valve variety or complicated, as it often is, with urethral stricture, upon bladder tumor, or upon tubercular disease of the prostate or the seminal vesicles.

The intensity of the irritability of the bladder is many times markedly affected by the habits and mental state of the individual. In these cases the plan of treatment already indicated may be sufficient to so greatly lessen the severity of the symptoms as to render the patient unwilling to have anything else done. When there is decided difficulty in the introduction of the catheter, either because of the size and direction of the canal, or because of an over-sensitiveness of its lining membrane, permanent retention of the instrument has been advised. In my judgment such advice is not good, for even if a soft catheter is employed, (and it certainly is to be preferred) it will soon become encrusted, it will be almost certain to increase the irritation, and it will be very difficult if not impossible, to keep it aseptic. In many cases, indeed in the very ones in which a sonde a demeure would seem to be most indicated, no soft instrument can be introduced.

It is in these cases of severe character, and often of irritable nature, that operative interference is so strongly called for, and is capable of accomplishing so much. Open out the contracted urethra by sound or knife, and the pre-existing bladder inflammation will generally rapidly diminish, perhaps altogether disappear.

If there is prostatic enlargement what can be