

bladder and is referred to its neck, hence the location of uneasiness alone should not be relied upon in forming a diagnosis. The abundant deposit of phosphates, such as occurs in debilitated states, can easily be distinguished from pus or mucus by the addition of nitric acid and the use of the microscope; in addition to this there would be absence of all the urgent symptoms of acute cystitis. Pyelitis, unless the ureter is blocked up, is productive of a copious sediment of pus; but, unless the bladder be involved, the urine when first voided is probably acid in reaction, instead of alkaline, as happens in those advanced cases of cystitis, accompanied by abundant pus formation; further, the albumen test will show much more cloudiness in proportion to the sediment, because the foreign element in pyelitis consists chiefly of pus not supplemented by mucus and phosphates.

Should structural changes take place in the substance of the kidneys, as usually occurs sooner or later in pyelitis, tube casts will be found. Neither will the vesical irritability be so great as in cystitis. Prostatitis, especially if leading to abscess, may closely simulate cystitis, but the distinction may be made by palpation through the rectum.

Calculi, though often productive of cystitis, may exist without it and cause many of its symptoms; but stone in the bladder, as a rule, has less scalding in the urethra, more frequent and copious hæmaturia, and the pain is greatest just after urination, while that of cystitis is temporarily relieved by it. In doubtful cases the sound settles the difficulty, unless the stone is encysted.

Simple irritability of the bladder arising from prolonged exposure to heat or cold, diuretic medicines, drastic cathartics, hysteria, neuralgic diathesis, or disease of neighboring organs as hæmorrhoids or prolapsus-uteri, is not likely to be mistaken for cystitis; for the attack is usually transitory, perhaps periodical, and the painful symptoms are the only ones observed.

In regard to treatment of the acute form in its early stage, the indications are all in the direction of the antiphlogistic. Rest absolute, for the patient, and as complete rest as can be secured for the inflamed organ—that is, saline cathartics to lessen the blood current and urinary flow—opiate suppositories to allay irritation, hot fomentations and counter-irritants, excepting the

cantharidal; demulcent drinks, in moderately small quantities and milk diet. Hot baths are very serviceable, and, if the urethra and neck of the bladder are not so sensitive as to make it difficult and very painful, it is much better to anticipate the excessive contraction caused by distention by the use of the catheter, and for obvious reasons a soft rubber is the preferable; for, as has been said, the spasmodic contraction induces hyperæmia of the mucous lining, causes still further perversion of its secreting function and so aggravates the malady.

As the urine is often highly acid in the early stage, the alkalies would be indicated; and in the later stages benzoic acid to counteract alkalinity. Various specifics have been praised—notably buchu, hyoscyamus, uva ursi, lupulin, cubebs, copaiba, and belladonna. Gross thinks copaiba in small and often repeated doses one of the best, if not the best remedy; and, as he thinks that a combination of remedies in this particular disease better than any one individually, he combines the copaiba with, I think, uva ursi and hyoscyamus.

I found in one case the capsules of copaiba, cubebs and santal wood apparently act well. I believe this fondness for copaiba did not originate with Gross, for Sir Astley Cooper used it extensively for the same disease.

Should the collection of mucus and pus be so great as to interfere with free urination, or should there be enlarged prostate with consequent permanency in the depression behind it, it would be necessary to use irrigations, which will be mentioned in connection with the chronic form of the disease. Of course when inflammation of the bladder is a result of other diseases, the cause must be removed if possible; otherwise the cystitis remains.

Time will not permit of discussing the chronic form of the disease, further than to say, that of course it is characterized by less pain; enormous quantities of sediment, consisting of ammonio-magnesian phosphates, mucus, pus, phosphate of lime, and often urate of ammonia; is apt to lead to extensive ulceration when it is considered incurable; may be lighted up into the acute form, when there will occur more pain and less sediment until the acute stage passes off again; and is liable to produce hypertrophy of the bladder, seldom concentric, ordinarily eccentric. It may last for