

ARTICLE XIX.

THE SORGHUM VULGARE, OR BROOM-CORN SEED, IN CYSTITIS. By ALEX. Y. P. GARNETT, M.D., Emeritus Professor of Clinical Medicine in the National Medical College, Washington, D. C.

THE recent articles which have appeared in different medical journals directing attention to the therapeutic virtues of the stigmata of maize as a remedy in cystitis, prompt me to furnish for publication my experience in the treatment of that disease, with the seed of the *Sorghum vulgare*, especially as this remedy, so far as I can ascertain, has never been introduced to the profession, and holds no place as such in any of the systems of practice or in any of the journal articles which I have seen.

Whilst there seems to have been some knowledge of the fact among certain practitioners of medicine in this section of the country, that the seeds of the common broom-corn possessed to some extent curative virtues in renal and cystic affections, this knowledge has never been utilized by experimental tests of such qualities. On the contrary, I find upon investigation that this plant has evidently been confounded with the ancient remedy for dropsy, the *Sarothamnus scoparius* or broom tops, and has probably never been used at all. By reference to the last edition of the *National Dispensatory*, we find that as far back as the seventeenth century the broom tops have been used as a remedy in dropsy and regarded as especially efficacious in those forms of anasarca produced by cardiac disease. At a later period several German and English writers have called attention to its virtues in the various forms of dropsical effusion and in certain inflammations of the genito-urinary organs. No special claims, however, seem to have been made for it as a remedy in cystitis until very recently.

As far back as 1860, I was induced to employ the broom-corn seed in cases of cystitis both chronic and acute, at the suggestion of those who had seen it used with great reputed benefit among the plantation negroes of Maryland and Virginia. The mode of administration practised by them was in the form of a decoction of the seed made by boiling two ounces (3½) of the seed in a quart of water down to a pint, and requiring the patient to take the whole of this pint during the twenty-four hours. It was alleged that a perfect cure could be effected in the space of ten days usually, by the use of this remedy alone. My experience, however, failed to sustain these extraordinary claims for its specific virtues, but satisfied me that it possessed undoubted merits in both the acute and chronic forms of simple cystitis. This opinion I verified by the results of numerous cases treated with the broom corn at that time. Owing in part to the exciting events and disorganizing influences at work in Washington immediately preceding the war, I failed to preserve any record of these cases. Within the past year I have had repeated opportunities of testing the value of this

remedy in cystitis, and whilst it may not be necessary to give in detail a record of each individual case which has come under my observation during that period, I will here refer to two or three of the most recent, including those at present under treatment.

CASE I.—Mr. T., a gentleman forty-eight years of age, consulted me in January last, affected with a well-marked case of chronic cystitis from which he informed me he had been suffering at intervals for the last six years, resulting, he thinks, from an antecedent attack of gonorrhœa, or the treatment used for its cure. He has had stricture dating contemporaneously with the cystitis, for which he has been treated at long intervals by the introduction of various sized bougies. For the last year the stricture has given him very little trouble except at intervals dependent upon indiscretion in the use of wine or exposure to damp and wet weather. The painful and difficult micturition, however, had continued without much abatement, together with more or less tenderness on pressure over the bladder. An examination of the urine by Dr. G. N. Acker furnished the following results: sp. gr. 1021; reaction acid; numerous leucocytes; some blood-corpuscles; epithelium from bladder and urethra.

This gentleman has spent the greater part of his life in travel both in this country and in Europe, and has been under the care—for short periods—of several of the most skilful members of the medical profession. He possesses a nervous temperament, is irritable, self-willed, and unwilling to subordinate his own judgment to that of his medical attendant, refuses positively to submit to any instrumental examination of the urethra or bladder, and relies greatly upon his capacity to treat his own case. At the time he came under my observation, he was using simply an infusion of dog-grass which had been ordered for him by a physician whom he had consulted in New York.

After much persuasion, I prevailed upon him to try a decoction of the broom-corn seed prepared according to the formula given above. Of this he took during the day one pint, using at night a suppository containing ext. belladonna: gr. $\frac{1}{3}$. Morphine sulph. gr. $\frac{1}{4}$. This treatment he pursued by special agreement between us, for five consecutive days and nights, when he was compelled to acknowledge himself greatly relieved, and consented without further solicitation on my part to continue the use of the decoction as long as he experienced any benefit therefrom, or as I thought it advisable for him to do so. At the expiration of three weeks he had so far improved as to micturate without pain, go out on long walks, with improved appetite and capacity to sleep, and expressed himself as feeling better than he had done for many months. Whilst he had been kept upon the maximum quantity of the decoction, the suppositories after the first few days had only been used twice a week, being held in reserve for future use as the urgency of the symptoms might demand. I occasionally saw this gentleman for two months; learned that he was still using the broom seed tea in smaller quantities, being fully impressed with its beneficial effects in his case, and confidently predicting his ultimate recovery by its use.

CASE II.—The second case is that of a Mrs. S., a woman about 28 years of age, in good condition and healthy appearance. Has suffered with cystitis for the last three years, attended with aggravations more or less severe, resulting from accidental causes. I could obtain but a meagre history of this case, owing to the fact that she had not, until the last

twelve months, given her case much attention, and had not up to that time put herself under the care of any physician. At the time she came under my treatment, she was suffering with great irritability of the bladder and intolerance of urine, requiring constant and painful efforts to expel it. Appetite and sleep impaired. Supra-pubic and intra-vaginal pressure against the bladder occasioned much pain. Chemical and microscopical examination of the urine showed the following: Dark yellow colour; sp. gr. 1027; reaction very acid; heavy sediment consisting of urates, mucus, muco-pus, and epithelium from bladder and vagina.

An exploration of the bladder with a steel sound satisfied me that it contained no calculi, and that this was a simple case of cystitis of long standing. Without going into details, it is sufficient to state that the treatment consisted in daily washing out the bladder with tepid water; the application of hot water bags to the pubic region; an anodyne suppository every other night for two weeks, and the free use of the decoction of broom-corn seed. She has now been under treatment for three months, steadily improving, all other remedies having been suspended for the past four weeks except the decoction; the urgent symptoms of frequent micturition and pain having almost disappeared. It is proper for me to add as corroborative testimony in favour of the broom-corn in this case, that on more than one occasion, when the decoction was suspended for several days in consequence of her inability to procure the seed, the unpleasant symptoms became aggravated. She is still under observation, and faithfully and hopefully adhering to the treatment.

CASE III. is that of a married lady, 36 years of age; has never borne children; possesses a nervous, excitable temperament; has been suffering with cystitis for eighteen months; symptoms at no time very urgent; more or less incontinence of urine. Microscopical examination confirmed the diagnosis.

Came under my care during the latter part of January last. Seems to suffer more from nervous irritability, manifesting itself in what she calls the fidgets and insomnia. Says she feels constantly like jumping out of the window; evidently some hysterical complication. Examination of the pelvic viscera discloses no uterine disease or displacement, but positive evidence of cystitis. Before consulting me she had been under the treatment of several physicians, including a homoeopath, and had used most of the diuretics generally employed in such cases—particularly the infusion of uva ursi—deriving in some instances temporary benefit only. Irrigation of the bladder with tepid water was ordered to be used every other day. The decoction of the broom-corn seed, a pint daily, containing potass. bromid. ʒj. and an anodyne suppository at night, rest in bed, and abstinence from all stimulating drinks and diet, were enjoined. Under this treatment she immediately began to improve, and after a few days the bromide was discontinued, and the suppositories introduced every other night. She continued to practise the irrigations for two months, at the same time using the decoction as a drink, and observing the general hygienic directions given at the commencement of her case. Since the first of April I have occasionally seen this lady, who informed me a few days since that she has discontinued all treatment for the past few weeks, and considers herself cured.

CASE IV. is that of a gentleman, 50 years of age, suffering with all the symptoms of cystitis, associated with a stricture at the membranous portion of the urethra, the consequence he thinks of a former gonorrhœa.

Symptoms are those usually met with, and described in Case I. Has been affected for a year or more, but subjected to no medical treatment until he consulted me about three weeks since. Microscopical examination gave about the same results as in the other cases—mucus, muco-pus, and bladder epithelium in large quantities.

The symptoms in this man's case have not been of such a severe character as would compel him to take to his bed, or confine himself to his house, until I was sent for. For four days he was kept in bed with hot applications over the bladder, an anodyne suppository at night, and a pint of the decoction of broom-corn seed ordered to be taken daily. Owing, however, to the nausea produced by the decoction, I have been compelled to use it in smaller quantities, as I have been able as yet to procure no better preparation of the seed. For the last two weeks he has been permitted to go out to attend to business, having manifestly improved in every particular. He recognizes and appreciates his improved condition, and feels fully satisfied that his relief is due to the effects of the medicine. This case is still under observation and treatment. Interference with the stricture has been postponed until further general and local improvement.

Some objection may be urged against the particular form adopted for the administration of the remedy in the above cases. It will very possibly occur to most practitioners that any substance given in such large doses would be a serious obstacle to its use, as nausea would in most cases be likely to ensue. Such, however, has not been my experience with its use in that form. I have preferred this primitive mode of employing this remedy, because in preparing the decoction the seeds alone are employed, and as these are supposed to contain a larger proportion of the active principles upon which its therapeutic virtues depend than any other portion of the plant, we may naturally expect to obtain more positive results. It is not to be denied, however, that a fluid extract prepared from the seeds would be a much more popular, and, perhaps, an equally efficacious mode of administration.

I shall offer no theory regarding the physiological action of this remedy. Not having, as yet, been able to procure the necessary analysis to determine its proximate principles, I am not prepared to say in what particular constituent element resides its therapeutic virtues. It may simply be due to the large amount of mucilage contained in the kernel or seed proper, to some combination of the phosphorus found in the epidermis or rind of the seed, or belonging, as it does, to the same family with the sugar cane, it may possess in different combination, some of the principles of saccharine matter, which, associated with the above, might as a whole constitute its medicinal power. Whilst it manifestly relieved the disease, I observed no decided augmentation in the quantity of urine expelled.