be made out, were, besides dental irritation, thwarting, vexation, or mental disturbance. The *excito-motory* theory, which has been so strongly insisted upon by Dr. Marshall Hall as explanatory of the phenomena of this disease, offers a reason for the peculiar excitability of the muscles of the larynx in the irritation of the dental branches of the fifth pair of nerves; it thus shows the *course* of the diseased action, but leaves us still in the dark as to the cause why a peculiar spasmodic action of the laryngeal muscles should take place in certain cases of dental irritation, whilst in other cases general convulsions, carpo-pedal contractions, or other well-known effects should arise from apparently similar circumstances.

The exciting cause of the spasmodic action of the muscles of the glottis in Case II. appears to have been inflammation of the larynx and bronchial tubes, together with dental irritation. The usual signs of head affection were absent both before and after death; the thymus was perfectly normal in appearance; the recurrent nerve was unimpeded in its action; the stomach and bowels were free from disease, and performed their functions properly. No other commonly accepted cause of the laryngeal spasm remains but bronchitis and dental irritation combined with hereditary predisposition. Lancing the gums was servicable only in the early stages of the complaint, therefore I am disposed to exclude dental irritation from the list of causes in the latter periods of the patient's life, and to ascribe the continuance of the disease to the catarrhal affection only. I need scarcely add, that Dr. M. Hall's theory, whilst it explains in the latter case as in the former the course of the disease, fails in pointing out its cause.

ON BENZOIC ACID IN URINARY DISORDERS.

By JOHN SMITH SODEN,

Surgeon to the United Hospital, Bath.

[Read at the Annual Meeting of the Bath and Bristol Branch of the Provincial Medical and Surgical Association.]

As the regulations of the district branch societies require that communications at these meetings should be chiefly of a practical nature, I shall merely call the attention of the members to a remedy that has been lately recommended for the relief of irritable bladder, and state my own experience of the efficacy of benzoic acid in cases of that description.

In the last volume of the *Medico-Chirurgical Transactions*, there is a paper by Mr. Ure on gouty concretions, in which he states that most unequivocal proofs have been afforded him of the efficacy of benzoic acid in correcting and removing certain disordered states of the urine in individuals prone to attacks of gravel. In the "*Provincial Medical and Surgical Journal*," of February 26, 1842, Dr. Walker, of Huddersfield, published an account of the advantage he had witnessed from the use of benzoic acid, combined with balsam of copaiba, in certain affections of the urinary organs. Dr. Walker's statements induced me to adopt his practice, and the first favorable opportunity of testing its efficacy occurred a few days after I had read Dr. Walker's paper, when I was summoned to an elderly gentleman who had long suffered from

irritable bladder and enlarged prostate. Three years ago I saw this patient on account of retention of urine. I was then informed that, for a considerable time, he had had frequent inclination to pass urine, though able to void only a small quantity at each call, and that the urine was generally loaded with mucous secretion. I found enlargement of the prostate, but had no difficulty in passing a catheter; I emptied his bladder, and the urine drawn off contained a considerable quantity of muco-purulent deposit. The catheter was passed daily, and the bladder washed out with warm water; the hip-bath, with rest, and the means ordinarily adopted in such cases, soon mitigated the severity of this attack. The patient acquired the power of introducing the catheter himself, and has used the instrument, I believe, daily ever since that period. I occasionally felt the instrument strike against a calculus, but the state of the prostate, and advanced age of the individual, rendered an operation inadvisable. During the last three years he has taken most of the remedies generally recommended on such occasions, and thinks the *uva ursi* has been most serviceable to him. He had not, for a long time, been under the care of a medical man, but trusted entirely to his own management, till I was sent for in March last in consequence of aggravation of suffering. He showed me the urine he had recently passed and drawn off. It deposited a large quantity of muco-purulent discharge. He complained much of the irritability of the bladder. I injected warm water, and, as on former occasions, he had derived more benefit from the exhibition of *uva ursi* than from any other remedy, I prescribed that medicine, together with the use of the hip-bath, and a suitable regimen; as no material relief ensued at the end of three days, I directed the benzoic acid in the following form:—

Benzoic acid, one drachm;

Balsam of copaiba, half an ounce;

Yolk of egg, enough to form a mixture with seven ounces of camphor mixture. Two tablespoonfuls to be taken thrice a-day.

I never witnessed anything equal to the efficacy of this medicine; the urine became clearer after the first dose, and in two days it was perfectly free from mucous deposit; the irritability of the bladder was lessened, and in four days the patient resumed his self-management. I did not feel the calculus during this attendance. The gentleman left Bath about six weeks after this period. I saw him a few days before his departure; he told me that he was as well as usual, that he continued to use the catheter, but that the urine was quite clear, and that when he observed any tendency to mucous deposit he had recourse to the mixture, and always with success.

The result of this case induced me to give the medicine a trial at the United Hospital, and our intelligent house surgeon, Mr. Morgan, has been kind enough to give me the heads of four cases in which it has been exhibited at that institution.

CASE I.—A man, aged thirty-five, applied for admission as an out-patient, complaining of frequent desire to make water, which has existed for the last month; the urine deposits mucous sediment; the patient has no gonorrhœa, and refers his disorder to being much exposed to cold and wet. On passing a catheter the urethra was found perfectly natural, but

there was some slight hæmorrhage after the urine had been evacuated; has some pain in the loins; pulse rather strong; was at first cupped on the loins, and ordered aperients; and then diosma and the pareira brava, with opiates, were given in succession. After having attended for three weeks, he complained of some pain in the joints, for which he was ordered colchicum, and though it greatly relieved the rheumatic affection, produced no beneficial effect upon the state of the bladder. Mr. Soden saw him, and directed the mixture, with benzoic acid and balsam of copaiba. He found benefit after using it for two days, and in ten days was perfectly well.

CASE II.—A married woman, apparently in good health, was admitted as an out-patient, stating that she had frequent desire to make water; the urine depositing on cooling (she says) a whitish sediment; urine slightly acid; she has been under medical treatment at intervals during the last six months, but without deriving any benefit from the means adopted. The mixture, with benzoic acid and balsam of copaiba, was ordered immediately, and she was discharged, cured, in three weeks.

CASE III.—A man, aged fifty, has been under the care of two surgeons for a month, owing to having suffered from irritability of the bladder. Has now frequent desire to make water; a small quantity of blood is occasionally passed with the last drop of urine; some ropy mucus is deposited in the urine, which is slightly acid, though it very soon becomes ammoniacal on standing; there is some irritation at the glans penis; on sounding, no stone could be detected. He was ordered the benzoic acid mixture, but only continued his attendance for three visits (eight days), during which time great relief was afforded, and as he has not since applied at the hospital, he is most probably well.

CASE IV.—A man, aged thirty-seven, after a severe attack of gonorrhœa, which appeared, by his description, to have been attended with acute inflammation of the bladder, was admitted an out-patient. He complains of being obliged to make water very frequently, having to get up six or eight times in the night to empty his bladder; has much pain in front of the pubis; some ropy mucus is deposited in the vessel, after the urine has been standing some time. After trying several other remedies without advantage, the benzoic acid mixture was ordered, from the use of which he experienced great relief in two or three days, and at the end of ten days no mucus was discovered in the urine.

The most remarkable circumstance connected with the exhibition of this medicine, as far as my experience goes, is its decided efficacy in diminishing, and, in some instances, completely suppressing the mucopurulent deposition in the urine, which is so prominent a symptom in most cases of affection of the bladder. I am aware that a doubt may be very fairly entertained whether this effect is to be attributed to the benzoic acid, or to the balsam of copaiba, or to their combination. In the few cases which I have just related I was induced to give both these medicines, from the advantage which had been derived from their use in Dr. Walker's practice. It is, however, very desirable to ascertain the effect of benzoic acid alone in similar cases, more particularly as balsam of copaiba

so frequently disagrees with delicate stomachs. I shall therefore not fail to avail myself of future opportunities of trying it, uncombined with other active ingredients; and the hope of inducing my brethren of the Association to endeavour to establish the real worth of a remedy that promises to be serviceable in a very formidable and distressing class of complaints, has been my principal motive in occupying so much of the time of the meeting.

CASE

OF

OVARIAN TUMOR IMPEDING DELIVERY.

By CONWAY T. EDWARDS,

Surgeon to the Batheaston Lying-in-Society.

Towards the latter part of 1840, I attended a young unmarried woman for a tumor, which appeared to occupy the situation of the right ovary; its diameter was not more than an inch, and pressure upon it produced great pain. The symptoms then present were indicative of inflammatory action, and the treatment directed to subdue that action consisted in a large general bleeding, saline aperients with tartarised antimony, protochloride of mercury, and low diet.

This active antiphlogistic plan produced no abatement in the disease, although it was pursued for two weeks; an alternative course of mercury, combined with the extract of hyosciamus, conium, or belladonna, was then tried for a considerable period, with a similar result; and this was changed for that of iodine and its various preparations, but with no success. Nothing more was done until the month of February, 1841, when an inability to pass her urine compelled the patient to submit to having it drawn off with a catheter. I took away nearly a quart of high-colored water, and, examining the abdomen, found the tumor had enlarged, and advanced rather more towards the mesial line than when I made the first examination. The pressure which I used caused much pain, particularly about two inches below the umbilicus. The necessity of making a vaginal examination being pointed out, she reluctantly submitted, but nothing was discovered which could account for existing symptoms. Leeches were applied above the symphysis pubis, and an elastic catheter was passed twice a-day for a week. She now found her health so much improved as to enable her to undertake the duties of a servant.

She married in the month of August, and I saw no more of her until January, 1842, when, her original complaint having suddenly reappeared with great aggravation of symptoms, she sent for me again.

Conception had taken place. Her sufferings were now so great, and the relief experienced from my treatment so small, that I was anxious to have a second opinion on the case, and proposed that my friend, Wilson Brown, Esq., of the Bath United Hospital, should be called in. This was agreed to. After a minute examination, it was concluded that, although the disease was involved in great obscurity, we were justified in deeming it ovarian. The treatment proposed was, fomentations with warm water, the weekly application of leeches, support of the abdomen by a flannel bandage, gently aperient medicines, and a