ON A REMARKABLE CASE OF SARCINA VENTRICULI;

WITH ANALYSES, MICROSCOPICAL AND CHEMICAL, OF THE FLUID VOMITED, AND OF THE URINE.

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THE case I am about to bring under the notice of the readers of THE LANCET occurred in the person of a member of the medical profession to whom I am indebted for a very interesting and detailed history of the symptoms under which, for a very long period, he has unfortunately laboured.

In the first letter received Dr. T— gives the following outline of his case:—"I have been suffering," he writes, "from a very distressing dyspeptic affection, off and on, for upwards of fifteen years, and I want you to be so kind as to inform me what the character of the urinary deposit is I herewith enclose. The peculiar features of my complaint are occasional severe gastrodynia, constant cardialgia and frequent vomitings—the latter occurring sometimes twice and even thrice a day; sometimes only once in two or three days; then again once a week or once a fortnight; and sometimes ceasing for six weeks or two months altogether. For the last eight or ten months, however, I regret to say these vomitings have been more persistent, and I now seldom get more than three or four days respite from them. Quantity thrown up enormous, averaging from four to five quarts per diem, and sometimes nearly as much at one vomiting, although the quantity of liquid taken during that time has not amounted to three half-pints. Vomited matter a clear watery fluid, mixed with a tenacious ropy matter, of a pale yellow colour, never dark, and so extremely acrid as to excoriate my throat and fauces, and to require from one to two ounces of bicarbonate of potash or soda to neutralize it before it can be brought up. Urine exceedingly variable; sometimes that passed after breakfast is scanty and as colourless as water; sometimes that passed during the night is of a light amber colour and in large quantity, but latterly this has been and is now more concentrated, small in quantity, not amounting, in addition to that passed during the day, to one pint. It is always frothy, covered with a greasy pellicle, and throws down a copious white deposit, the urine being of a deep brown colour. It turns reddened litmus paper blue, the red colour not being restored by heat, hence I conclude it to be alkaline without being ammoniacal. I have lately taken up the microscope with the great disadvantage of having no fellow student or tutor to give me a hint—no help, indeed, but the very slender one afforded by the very imperfect manuals we have upon the subject. I have tried to make out the characters of the deposit now sent, which I am always almost passing with the night excretion, but I cannot make it out, it looks more like columnar crystals of uric acid than anything else, but it cannot be so I presume with alkaline urine."

The deposit referred to was of a dirty yellowish white colour, and presented the appearance of some earthy salt. I will defer, however, for the present, stating the results of its analysis.

I then wrote for a more detailed history of the case, as also for samples of the urine and fluid ejected, with all of which I was supplied. The history of this case is so well put together, and above all so interesting, that I will give it in the exact words of the writer:—

"W. T—; age fifty-five, habit gouty; temperament nervous; form light and spare; habits unusually temperate; has endured much bodily and mental labour for thirty years—riding on horseback and in a phaeton twenty or thirty miles a day, and sitting up very late at night reading. Became slightly dyspeptic twenty-eight years ago, and felt slight pains in *epigastrio*, with flatulence and anorexia, for about ten years. About eighteen years ago attacks of pain became more violent, and assumed an intermittent and periodical character. Consulted now, in succession, Dr. Elliotson, Dr. G. Tuthill, and Dr. James Johnson; took charcoal, gunpowder, nitrate of bismuth, prussic acid, creosote, and nitrate of silver, without the least relief. Three years from this period, continual vomiting came on, and henceforth the pain in the stomach became greatly relieved. Continued to work on in my profession as a surgeon until five years ago, when the vomiting became so distressing and so violent as to compel me to relinquish practice. Now consulted Dr. Prout, who gave no positive opinion on my case, but feared no organic disease. Took, at his advice, the nitrico-hydrochloric acid, without any relief; but after remaining in London a few months, the vomitings entirely ceased, and my health became greatly improved. At the end of twelve months, went

down to N—, having official duty to do at Marlborough. Here I got quite well. From hence I was obliged to consult the health of a delicate daughter by going on to Clifton; and ultimately, in June, 1849, to settle down here in practice. Ever since my residence here, my health has again retrograded, and I am now obliged to confine my practice almost entirely to home consultation. The following is my

"*Present Condition.*—Frequent severe pains in *epigastrio*, immediately relieved on taking from one to two ounces of bicarbonate of soda in warm water. Vomiting occurring sometimes twice daily, sometimes every day, sometimes every other day, or once in three or four days. But little pain when the vomitings are persistent. Frequent attacks of pain below the umbilicus, apparently caused by azote gas pent up in the small intestines; relieved by an injection of turpentine, aloes, and soda or potash; the gas probably extricated from the acid fluid which has escaped the sentinel, and thus producing pain in its passage over the sensitive mucous surface of the ileum and jejunum. Intense headache occasionally, with vertigo on rising from my seat; so susceptible of cold as to be obliged even now to sit by a fire; muscular twitchings all over the body; occasional rigors previous to vomiting; painful momentary twitching of the ball of the thumb and great toe. No pain in any of the fingers; nevertheless, two of them are much contracted, one of my little fingers being bent down into the palm of the hand; the flexor tendons of all of them being more or less enlarged and thickened, but have never felt the least pain in them! Frequent flashes of light over the left eye, with an appearance of black specks floating before it; these amaurotic symptoms occur generally in the evening. Great debility, particularly when the vomitings have been severe, so that I can take but little exercise; indeed, I am greatly exhausted by the least exertion. Heart's rhythm very irregular, and pulse sometimes very intermittent; no palpitation; sometimes I have counted my pulse beat 1000 times without a single intermission. Have lost much flesh within the last twelve months. I rapidly regain strength and flesh if the vomiting ceases only for a few days. Great depression of spirits, and, I am ashamed to say, peevishness of temper. Sometimes no energy for the least exertion, even for writing a note of five lines. Rheumatic pains of both shoulders—nowhere else; violent cramps at night in the calves of my legs. When the stomach is brimful of acid, a violent, convulsive cough, which ceases immediately on vomiting. No pain in either renal region; none in right hypochondrium. Sometimes a very slight ardor urinæ on micturition.

"*State of Bowels.*—Almost always invincibly costive, yielding to no purgatives whatever; sometimes motions loose and yeasty in appearance, and never of an offensive odour; now, and for some time past, they have been regular, more natural, and figured.

"*Urine.*—Varies greatly in all its essential properties. Sometimes I pass large quantities during the night—say from one quart to three pints—of specific gravity 8 or 10, of a light amber colour; then, again, I do not pass more than from three to eight ounces during the night, but this is of high specific gravity, of a very dark brown colour, covered with a greasy pellicle, and loaded with phosphates, the vessel being highly tinged by *uroxanthin*; sometimes quantity increased after vomiting, sometimes diminished, but always contains more phosphates; for some time past, the quantity made altogether during the twenty-four hours does not amount to more than from twelve to fifteen ounces, so that it is hard to conceive how the blood is depurated. I suppose the stomach to be the scavenger for the whole system.

"*Vomited Matters.*—Food thrown up occasionally only; the vomited fluid a clear, thin, ropy fluid, mixed with a tenacious straw-coloured mucus; ejected fluid so intensely acid as to excoriate the fauces and tonsils, unless previously neutralized in the stomach with from one to two ounces of bicarbonate of soda or potash. (It has more than once produced sloughing of the tonsils.)

"*Addenda to 'Urine.'*—Odour sometimes natural and aromatic, but frequently, when concentrated, smells very strong, just like the urine of a horse. Morning urine sometimes neutral; sometimes gives a strong alkaline reaction on blue litmus paper, but usually it turns reddened litmus blue. It appears to me to be alkaline, but not ammoniacal. It has never shown the least trace of albumen or sugar, but of the oxalate of lime I am not so certain. Although the urine sometimes looks as if it contained mucus, yet I believe this appearance is caused by phosphates, as it mostly disappears on being treated with acetic or nitric acid. I have never detected or even suspected blood in my urine. A little of the lower stratum presents a beautiful object under the microscope, more like neutral triple phosphate than anything else, but yet not exactly like it. Sometimes I have observed in it large objects of a beautiful blue and green colour, which I took

for fibrinous casts of the uriniferous tubes; but as no albumen could ever be detected in the urine, I must, I suppose, have been deceived."

Accompanying the above sketch was a letter containing additional particulars, which I subjoin:—

"I have not had energy enough," Dr. T. writes, "to reply to your letter until now. Agreeably to your request, I have dotted down a few notes to serve as a brief history of my case, and a report of my present condition. I find, however, on looking it over that I have omitted some essentials, which I now subjoin by way of supplement.

"For the last four or five years preceding the death of the late truly eminent and very amiable Dr. Prout, I had placed myself, as already mentioned, under his care. He took a very deep interest in my case, and did everything in his power to relieve me, but I am sorry to say without success. His chief reliance was on a mixture of the hydrochloric and nitric acids, which I took on many occasions for a month together, but which I was at length compelled entirely to abandon, in consequence of its producing an increase of pain in the stomach, while it never in the slightest degree relieved the vomitings, and never did it, even after its most extended use, produce the slightest deposit of urate of ammonia in the urine, which at that time was generally neutral, except when the system was under the influence of bicarbonate of soda, which I was then, and had been for years, taking in enormous doses, frequently to the extent of a pound a week. The Doctor never decidedly discouraged me from these wholesale doses, seeing how impossible it was to obtain relief by any other drug. For obvious reasons, however, I have for some time past substituted bicarbonate of potash, and this I take now in quantities amounting to from one to two ounces previous to every vomiting. The acid *injesta* require full this dose to neutralize it, and without neutralizing it, I find it impossible to bring it up.

"I send you, as you desired, three specimens of my urine—*urina potus*, *urina cibi*, and *urina sanguinis*. The former, although passed after breakfast, generally I find very pale, light, and possessing very little urea; it is moreover very spare in quantity. The *urini cibi* is also very scant, and I do not often find a deposit in either of these specimens, and both are frequently acid. The *urina sanguinis* is usually alkaline, and seldom or ever ammoniacal; it is in this that the deposit occurs, consisting, so far as my own imperfect examinations go, of phosphate and carbonate of lime. I have never yet discovered any appearance of blood in the urine, nor can I for a moment suppose there is the slightest disease of the bladder.

"The vomited matter I send you was filtered off from the first burst from my stomach, before I had taken potash. The quantity of mucus present is generally immense.

"I believe this harassing complaint of mine originates in excessive bodily and mental labour, exhausting the great nervous centres, and depriving the organic system of nerves of their due supply of nervous energy, and hence results the derangement both of the primary and secondary assimilating processes. The acid secreted in the stomach is, I suppose, derived from a double origin—first, from the fermentation of the indigested *ingesta*; and, secondly, from the blood-vessels of the stomach. The acid is, no doubt, either the hydrochloric or the lactic; from the irritable rather than inflammatory condition of my stomach, I should say the latter.

"No system of diet seems to have the slightest control over the secretion. I have tried every species of diet, but do not find the slightest difference; the less, however, I eat the better I am.

"I can hardly expect to get entirely relieved after so long suffering, but if you could, after ascertaining the precise character of the vomited fluid, hit upon any drug that would render the presence of the acid less irritating to the stomach, I may perhaps have fewer attacks of vomiting and have a little more comfort.

"Although I have lost much flesh within the last few years, I do not emaciate half so fast as might be expected under so harassing a complaint; indeed, it is wonderful how soon I pick up my strength and flesh, if the vomitings cease but for a few days even.

"Pray pardon my delay in answering your letter. I should have done so long since, but I had not spirit for the task, the vomitings having, since I wrote to you, increased both in quantity and frequency. I can just muster energy enough to get through the long roll of patients who attend my rooms twice a week, and to amuse myself half-an-hour, perhaps, in the day with my books, my violin, or piano. These are my *Dii Penates*—my household gods, and I suppose I shall cling to them to the last."

Such, then, is a complete and graphic sketch of this gentleman's singular and distressing case, to the nature of which the details above given afford no positive clue. It will have been noticed that it presents several peculiar features, such as the obstinate

and frequently recurring attacks of vomiting, the extraordinary acidity of the contents of the stomach, upon which the vomitings, no doubt, to some extent depend, the enormous doses of alkalies taken, and the condition of the vomited matter and of the urine.

(To be continued.)

ON THE PATHOLOGY OF AFFECTIONS ALLIED TO EPILEPSY.

By C. B. RADCLIFFE, M.D., L.R.C.P.

(Continued from page 266.)

II. THE condition of the nervous system in the disorders under consideration is only to be determined by a separate examination of the chief ganglionic masses, and to this examination we therefore proceed. We would premise, however, that the designation, *nervous*, which is usually applied to this class of maladies, is itself an argument that they are not marked by any undue nervous activity, for, by a complete perversion of its true meaning, this word has come to signify the very reverse of any kind of activity. We would premise, also, in allusion to an error which has not unfrequently been mooted in our hearing, that convulsion can in no way be confounded with violent voluntary exertion. In truth, there is no possible analogy, and every difference, between them; for in the one the muscles contract independently of, and in spite of, the will, and in the other in obedience to it. The muscular contractions which constitute convulsion are violent enough; but, whatever their cause, they are altogether independent of true voluntary effort.

(a). What, then, is the condition of the brain in the affections allied to epilepsy?

1. Mental activity is inconsistent with any kind of tremulousness. In ordinary cases, where the disturbance is but transient, the thoughts and feelings range at random, and the mind and all its energies are unmanned; in palsy, a permanent blight has fallen upon the brain; in chorea, the state is one of imbecility or fatuity, or one which rapidly tends to become such; and so also in the tremors induced by mercurial fumes, when these are fully manifested. In rigor, the state is one of languor or stupor; in subsultus, of wandering silliness. In delirium tremens, the only difficulty is in the term delirium; the perspiring skin, the fluttering pulse, the melancholy nature of the delusions, the treatment demanded, all show the real state of the case. When it is otherwise, and the delirium and other symptoms partake of an active character, the complaint is then delirium *e potu*, but no longer delirium tremens; for just in proportion to the gain of mental activity is the loss of the distinctive tremor. The cessation of tremulousness during the mental quiescence of sleep may seem opposed to the idea that tremulousness, among other things, depends upon a diminished state of cerebral activity; but this, in reality, is only an apparent objection, to be accounted for, probably, by the forgetfulness of the presence and scrutiny of others (the fear of which is a very important cause of trembling), by the comforts of a warm bed, by the lessened expenditure of vital force in the recumbent position, and by other and equally obvious causes.

2. Insensibility and unconsciousness are almost inseparable companions of convulsion. They go hand-in-hand in the convulsions of fever, of cerebral disorder, of teething, of hæmorrhage, of the tarantula bite, and of death; and they scarcely separate in ordinary hysteric convulsion. In hydrophobia, as in delirium tremens, the patient is overcome by a sort of vague terror, and there is a consciousness capable of suffering, but that is all. The frequent occurrence of convulsion during sleep is also an argument that the state of the brain during convulsion is one of inactivity.

Nor is there any better proof of undue activity in the convulsions associated with inflammation of the brain, or with spiculæ of bone pressing upon that organ; for in both these cases the convulsions do not occur in the stage of active delirium, but during the primary collapse, or during the subsequent loss of power occasioned by alterations in the structure of the brain, or by external pressure of various kinds. It is so with the convulsions which refer to sun-stroke, blows upon the head, or idiopathic inflammation of the brain; for in all these cases the mental faculties are inactive, or suspended during the convulsion.

3. Spasm is in like manner related to a greater or less degree of cerebral inactivity. Cramp is always most prone to happen during the mental quiescence of sleep; and the liability to this affection is infinitely increased whenever the functions of the brain are specially interfered with, whether this be by the slow inroads of old age, or of poisons, such as lead, or by the sudden attacks of disease. The spasm of cholera is attended by in-