

something more. The second occurred at a residence, as we have stated, surrounded by water meadow; and the third occurred in the same parish as the second, only a mile lower down the same river. And it may be well to mention, that I have had another case of trismus in this same parish, but of a hysterical and not traumatic nature.

Facts, rightly interpreted, must ever comport with true science; and the object of the writer in detailing, thus imperfectly, these cases of tetanus, is the hope that they may assist in justifying the science of medicine. *Quinine* is the scientific means of treatment for disorders having an intermitting action; and *belladonna* is again the scientific means of overcoming natural and, it would seem also, morbid muscular contraction. It may be fairly inferred, from the progress of these cases, that the quinine arrested the diseased action; but in both the cases, the spasms only yielded when the fully accumulated effect of the *belladonna* was evinced in its peculiar narcotism.

And here the writer would suggest two things on the subject of the use of *belladonna*: 1st, to try the efficacy of every sample of the extract, by applying a solution to the conjunctiva, in order to see its power over the pupil; and, 2ndly, in the sleeplessness and irritability of tetanus, not to rely upon this narcotic for procuring sleep, which it does sometimes, but only seldom, produce. In these cases, the liquor opii sedativus, or morphine, was of signal service in promoting sleep.

In the three cases here narrated, in the case of hysterical trismus alluded to, and in another similar case in a valley a few miles further in the same direction, the circumstances permit the conjecture that malaria *might* have predisposed, where moisture was undoubtedly in action. Malaria has been demonstratively proved to exist in many places not visited by any well defined type of intermitting fever; and if we suppose that in a brewery, where the vegetable matters and fermentable substances abound,—in a state, too, of warmth and moisture,—malaria may be in existence, as it has been proved to be in Covent Garden, and other like places, then we cannot exclude the notion of malaria having predisposed all the five patients, here spoken of, to their attacks of tetanus and trismus. With such a conjecture, having some little analogical support, the treatment by quinine, in the successful cases, is in perfect harmony.

Dorchester, July 1855.

### REPORT ON AN INTESTINAL CONCRETION FROM A HORSE.

By GEORGE RIGDEN, Esq., Surgeon to the Canterbury Dispensary.

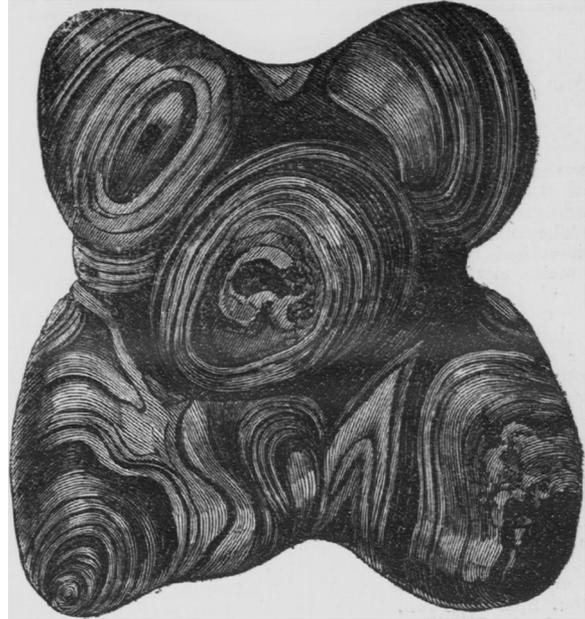
[Read before the South Eastern Branch, June 27th, 1855.]

THE concretion represented in the accompanying woodcuts was taken from the large intestine of a horse; but in consequence of the person who opened the body and found it not being acquainted with the anatomy of the parts, I have not been able to ascertain the exact position in which it was lodged; indeed, but for its weight and size, it might have escaped notice. It evidently consists of a large portion of animal mixed with earthy matter, deposited in layers. I had expected to find the earthy matter composed principally of lime; but from an analysis made in this city of some of the powder produced by its division, I am assured that lime does not enter into its composition, but that the inorganic matter is composed of an ammoniaco-magnesian phosphate. Its weight when first removed was two pounds four ounces; it measured six inches in its longest diameter; and had six distinct prolongations or angles running from its centre or nucleus, which was formed by a nail or long piece of iron. The layers of the concretion were nearly black and buff-coloured, with a peculiarly bright shining surface.

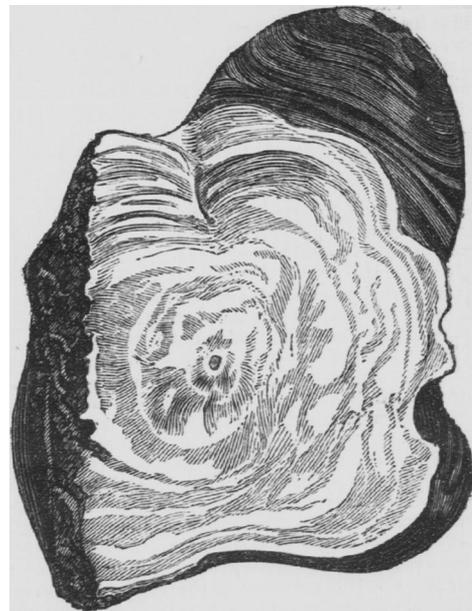
The horse had been in the possession of its last owner (a carrier) for at least twenty years, and had not been known

to suffer from illness or other inconvenience from the concretion. It had been fed upon split beans, dried and green meat, but not upon bran; and was only destroyed in consequence of its extreme age.

The concretion was purchased by Mr. Alderman Masters of the person who removed it, upon the condition of its being placed in the Canterbury museum.



A view of the concretion, showing five of its angles.



A section of the concretion showing, in the centre, the nail or piece of iron which probably formed the original nucleus.

It is not uncommon to find concretions of the like or a similar nature in the intestines of horses, particularly in those belonging to millers, or that have been fed principally upon bran; but they are not usually so large, and are generally of a more globular form. The great peculiarities of this concretion appear to be its large size, its angular form, and its bright and shining surface; this last property appears to have been acquired by the liquid matters constantly passing between its angles, as the extreme

points have not the same appearance, but evidently have coverings of mucus matter, shewing the points of adhesion or contact to the sides of the intestines. Its form may have been determined by the head and point, and the four angles of the nail.

Canterbury, July 1855

## REPORTS OF SOCIETIES.

### EPIDEMIOLOGICAL SOCIETY.

MONDAY, JULY 2ND, 1855.

AN ACCOUNT OF THE EPIDEMIC OF SMALL-POX WHICH OCCURRED IN THE ISLAND OF JAMAICA IN 1851-2.

BY EDWARD GATOR SEATON, M.D.

The author had drawn up this account from the returns which had been made by various medical practitioners in Jamaica to the questions circulated by the Central Board of Health in that island in 1852. Copies of these returns were forwarded to the Small-pox and Vaccination Committee of the Society, and were found to contain much interesting matter on the general subject of vaccination in hot climates, as well as a pretty complete history of this particular epidemic of small-pox up to the autumn of 1852. It was of this history only that Dr. Seaton treated in the present communication.

The epidemic commenced in July 1851, in the northern part of the island, in the Hyde Estate, in the county of Trelawney, where it appeared to have been imported by some African emigrants. There had been no epidemic of small-pox in Jamaica since the year 1831. From the Hyde Estate it was communicated to other parts of the county of Trelawney—to St. Ann's, adjoining Trelawney on the east, and to St. James's, adjoining it on the west. It was traced successively to Portland, Kingston, Spanish Town, Vere, Clarendon, Hanover, and Westmoreland. It still existed in Westmoreland; and indeed was just commencing at Savanna-la-Mer, when the returns were made to the Central Board. Vaccination had been neglected to a remarkable extent in Jamaica; there being the greatest possible difficulty in getting the people to be vaccinated, except under the terror of an impending epidemic of small-pox, when they anxiously sought the protection. One practitioner, for example, who in a residence of sixteen years had not vaccinated more than 200 persons, operated on upwards of 3000 in a short time after the outbreak; and the testimony of all the others was to the like effect. Under these circumstances, it was to be expected that the epidemic would be wide spread and fatal; and as further, in some parts of the island the disease was propagated by inoculation, till this practice was made penal by an order in Council.

Dr. SEATON then proceeded to notice the principal features of the epidemic under the various heads of the period of incubation, duration of the precursory fever, course of the eruption, and period at which death took place, in fatal cases, complications, treatment, etc. The principal complication appeared to have been diarrhoea or dysentery. Measles were seen along with small-pox by Dr. Bowerbank of Spanish Town; and Dr. Chamberlaine of Kingston; and many cases were seen by various practitioners in which these diseases succeeded each other. With regard to the susceptibility to small-pox manifested by the various races, the immense majority of cases occurred in the negro race; but the reasons assigned for this are, that this race is in overwhelming preponderance, and that the white race almost universally, and the coloured population very generally, are protected by vaccination. So far as observation of this epidemic, and the opinions of the present reporters went, they would not support the view that the negro race is liable to any malignancy of type, except from extraneous circumstances, as their extraordinary filth, crowding, and the like.

On the protective value of vaccination, the returns give important information. They show that in a large number of cases reputed to be vaccinated, there was a total absence of evidence that the vaccination had been effective; and that the same difficulty is experienced in Jamaica, which has been felt in this country, in securing the proper inspection of the vaccinated, and even to a much greater extent. Dr. Clarke, of Annotto Bay, gives an account of the results of his inquiries respecting 450 persons who had been subjected to the vaccine puncture, and who resided in localities which for months were

the seat of epidemic small-pox. Eight only of these were reputed to have had small-pox. In six of them it was satisfactorily ascertained that no vesicle had followed the operation; the other two had left the neighbourhood before the inquiry was instituted. Instances were given of localities well vaccinated enjoying entire immunity from the disease. Abundant evidence was also furnished in the returns of the careless manner in which vaccination was often performed, and of the extent to which improper lymph was used, giving rise frequently to spurious results. Yet when small-pox afterwards occurred, it was put down as "after vaccination". On the subject of the modifying power of vaccination, the most valuable information was given by Dr. Bowerbank. He had kept a record of 900 cases of small-pox attended by himself; of these, 241 had never been vaccinated, and of them 45 died, or more than 18 per cent.; while, of 58 who had been vaccinated, only 2 died; and of 2 who had been inoculated, 1 died. In one of the two deaths said to be after vaccination, there was no evidence of the vaccination; in the other, the small-pox succeeded to measles, and was complicated with dysentery, which was in fact the fatal disease. Of the 58 vaccinated, in 34 there were good cicatrices, in 12 imperfect cicatrices, and in 12 none at all. Of the 241 unvaccinated, the disease was confluent in 51, discrete in 183, and modified in 7. Of the 34 vaccinated with good cicatrices, it was confluent in 2, discrete in 14, and modified in 18. Of the 12 with imperfect cicatrices, it was confluent in 0, discrete in 11, and modified in 1. Of the 12 without cicatrices, it was confluent in 3, discrete in 9, and modified in 0. With regard to race, of the 241 unvaccinated, there were 5 whites with one death, 98 coloured with 18 death, and 138 negroes with 26 deaths. The ratio of mortality therefore in all the races would appear to have been the same. The results recorded by Dr. Turner, of Spanish Town, were generally in accordance with those obtained by Dr. Bowerbank. He also saw cases of small-pox in people who had been inoculated, and in others who had had the natural disease. As the general result of their experience, the medical practitioners of Jamaica expressed, without exception, their unabated confidence in the protective value of efficient vaccination; and, with one exception, their opinion that inoculation is both inexpedient and unjustifiable. Even the exception is only apparent; as the practitioner, who thinks the practice sometimes advisable, would restrict it to cases in which a large number of persons susceptible of small-pox are collected together, *without there being a supply of reliable vaccine lymph*. These conclusions, Dr. Seaton observed, were entirely at variance with the extraordinary statement promulgated a few years ago by Dr. Copland, that in hot climates and dark varieties of the human species, vaccination had been demonstrated to be inefficacious—a statement most mischievous, if not true; and for which he had never been able to find any foundation, either in published books or in documents which he had been able to consult.

Dr. STEWART (Superintendent-General of Vaccination in Calcutta) said that the facts and views of the author were especially satisfactory to him; as during the thirty years he had superintended vaccination in Calcutta, he had frequently been obliged to urge similar views on the notice of Government, in the face of opposition, not a little of which came from individuals for whom he had the highest respect. It had been to him a source of deep regret, that among the Bengal Medical Board there had been a desire to revive the practice of inoculation. Dr. Stewart did not attribute the occasional failure of the protective power of vaccination to any deterioration of the lymph; but to a neglect in the proper performance of the operation, the indiscriminate selection of subjects, and the want of care with regard to seasons, and due watchfulness over the cases that were operated on.

Dr. SEATON was anxious to ascertain from Dr. Stewart the proportions of the vaccinated and the unvaccinated in Calcutta; and what public provision there was for the purposes of vaccination.

Dr. STEWART said the ever great difficulty was in ascertaining the numbers vaccinated and unvaccinated in Calcutta. In consequence of a severe epidemic of small-pox in Calcutta some years ago, some means were adopted to restrain inoculation; and upon Dr. Stewart's representation to the Government, a certain number of sub-assistant-surgeons were appointed to take charge of the few districts into which Dr. Stewart subdivided the town. Under each of those officers seven or eight native vaccinators were placed; and the greatest care was taken with regard to the performance of the operation, and the watching of the cases afterwards. This practice was now in successful operation in Calcutta; and every case of