

which contains his valuable researches on Bright's Disease. Rayer acquired an extensive and very lucrative practice amongst the higher classes in France, and was physician to the Emperor. He is said to have left a fortune of about £400,000 sterling. One of Rayer's chief titles to distinction is derived from his devotion to the progress of medical science. In 1849 he founded the Biological Society, which Bernard and Brown-Sequard, Robin, Lebert, and others have illustrated by their discoveries. He drew attention to the importance for a physician of a knowledge of the diseases of animals, and a few years ago, by the influence of the Government, a chair of Comparative Pathology was created for him at the Ecole de Médecine; he published an introductory address, but never lectured. He was at the same time made Dean of the Faculty of Medicine, but encountered so much opposition, in consequence of what was regarded as Government intrusion, that he resigned after two years.

Rayer was member of the Academy of Medicine (1823) and of the Academy of Sciences, and he was the founder and president of the General Medical Association of France, which was established for protecting the interests of the profession, granting assistance to the unsuccessful, and providing pensions for widows and children in cases of need. He died on September 10, of an attack of apoplexy. The funeral ceremonies were unusually splendid.

### DISINFECTANT TREATMENT OF YELLOW FEVER BY MEANS OF SULPHUROUS ACID,

BY DR ALEXANDER FIDDES, F.R.C.S.E., of Jamaica.

THE following extracts from the Jamaica newspaper, "The Gleaner," published at Kingston, appear to indicate a successful application of the anti-zymotic treatment to cases of yellow fever during the recent epidemic in that island. The subject is a very important one, and the results arrived at deserve attention. In a leading article in "The Gleaner" of 9th July, we read:—

"In dealing with yellow fever, which is universally admitted to be a most deadly and fatal complaint, it is satisfactory to know that there are certain curative agencies which hold out a better hope of recovery than those hitherto in use, and we are happy to announce that these have been tried with the best results in the fever with which we have been recently visited. The remedy or treatment we allude to consists in the internal administration of sulphurous acid, combined with the external application of iced sheets around the body when the skin is hot and dry, or with an occasional vapour-bath when the skin is dry without being very hot. During the late prevalence of yellow fever this treatment succeeded better than any other in curing the disease, and was attended by an amount of success forming a remarkable contrast to what had been obtained before.

"Calomel, quinine, and all other medicines are set aside, as being not only useless, but positively injurious; the only medicine recommended being a full dose of castor-oil at the beginning of the disease.

"The use of the sulphurous acid and the application of the wet sheets or vapour-bath, are indicated as much by the dictates of theory as by the lessons of experience. The first is a preventive remedy against fermentation of the blood; the two latter are potent agencies for withdrawing or abstracting poisonous matter from the body, without weakening the vital powers. Since Professor Polli of Milan instituted his elaborate series of experiments to test the efficacy of sulphurous acid in arresting fermentation in the blood of animal bodies, and since Dr De Ricci of Dublin, and Professor Burggraeve of Ghent, repeated the same, the therapeutical power of this medicine has been well known to the medical profession; but we believe that Dr Alexander Fiddes, F.R.C.S.E., practising in this island, is entitled to the credit of having introduced it as a remedial agent in yellow fever, and we understand that every confidence is placed in it, not only in this complaint, but in several others of the large family of zymotic diseases. The sulphurous acid is not given in its

pure form, but combined with an alkaline base, such as the bisulphite of soda, the sulphite of magnesia, or of potash, or of ammonia, of which the former preparation is probably the best, being tasteless, and not likely to offend the stomach. The dose is 20 grains every two or three hours in a glass of water."

In the same newspaper, of date 24th August, is a letter from Dr Fiddes, from which we extract the following:—

"I am more and more convinced that the use of the sulphurous acid (given in the form of the sulphite of magnesia or of soda), and the adoption of the vapour-bath or the iced sheets, as an envelope of the body when heat and dryness of the skin require them, is the most rational plan of treatment which has hitherto been devised for the successful management of this formidable disease. This remedial method has succeeded better in my own hands than any other I have used before, or seen practised by others, and I can speak from a very considerable experience; but the treatment, to be efficacious, must be vigorously and systematically carried out from the first appearance of the disease to its termination, and, above all, the medicine should not be mixed or jumbled up with other therapeutical agents, and particularly with those which might counteract or neutralize its antiseptic action.

"The great object to be obtained by the use of the sulphurous acid is the arrestment of fermentation of the blood, which the yellow-fever poison, whatever that may be, has a strong tendency to produce, by fixing on and establishing a chemical affinity with certain elements existing in unacclimated blood, and so leading to its disintegration and dissolution; and this septic process is probably effected in the same way that yeast or any other ferment multiplies and reproduces itself when thrown into a material substance favourable to its operation. To arrest and stop this zymotic or fermenting action, no agent has yet been discovered which possesses power equal to sulphurous acid, and this fact has been fully ascertained by the elaborate and carefully conducted experiments of several eminent medical men in Europe, and there can be no doubt whatever that it is the medicine rationally indicated in the treatment of yellow fever; but to give the remedy fair play, the character of the disease must be diagnosed early, and when that is done, the sulphite must be given immediately, and administered in full doses with great punctuality—20 grains every two or three hours, so as to ensure and maintain full saturation of the blood. Any nibbling with the medicine by giving it in insufficient doses, or at prolonged intervals, would probably end in failure.

"I regret that I am unable, as yet, to furnish full and complete statistical data of the real and actual results of the sulphite treatment of yellow fever: I have applied for the necessary information at the proper quarters, and as soon as I may be supplied with it, will lay it before the profession and the public. In the meantime, I may mention the fact that the late epidemic of yellow fever at Newcastle has been attended by a rate of mortality 24 per cent. under that which happened there in the year 1856. In that year yellow fever broke out among the soldiers of the 36th Regiment, commencing on the 20th of September, and terminating on 23d December—that regiment arrived here in H.M.S. Resistance, on the 14th September 1854, direct from Barbadoes, where it had been stationed between two and three years, during which time it is reasonable to suppose that the corps underwent an acclimatizing process; it had, moreover, the benefit of a two years' residence in this island before yellow fever appeared amongst the soldiers at Newcastle. It seems fair to infer that the four and a half years' usage or seasoning to a tropical climate with which this regiment had been favoured, should have led to its protection against yellow fever, or at any rate, that this favourable circumstance might have mitigated the severity of the disease, and brought the death-rate below that which usually occurs in persons altogether unacclimated. The result of the pestilence, however, at that time was most disastrous, for out of 70 private soldiers attacked, including two officers, 44 died, showing a death-rate of 62.85 per cent., although the cases were supervised and carefully watched by Dr Robert Lawson, the then deputy inspector of hospitals, one of

the ablest and most accomplished medical men whom it has ever been my fortune to meet. The 84th regiment, now stationed at Newcastle, and which has lately been the subject of a most malignant type of yellow fever, arrived here from Europe on the 2d April last, so that the men have not been sufficiently long in the island to reap the full benefit of acclimatization. Nevertheless, I find that, from the 9th July to the 16th August (since which date I have no returns) only 21 have died out of 54 attacked, being a death-rate of 38.88 per cent., or 24 per cent. less than it was in the epidemic of 1856. I am unable to state what number of yellow-fever cases at Newcastle has been treated by the sulphurous acid, although on my visit there, on the 26th July, I found that the medical officers were using it in all or in most of the patients; but until I can obtain more minute and precise details of the principles of treatment adopted in all the cases from first to last, it would be rash to draw an absolute conclusion as to the efficacy of the sulphites in yellow fever. All I can say at present is, that the use of the sulphurous acid has succeeded better in my own practice than any other, and that the result of its recent trial among the troops at Newcastle will be communicated to the profession whenever I may be put in possession of it; but I may repeat that the reduction of the death-rate by 24 per cent. is a matter of no inconsiderable importance.

"In my next communication, I may probably furnish a synopsis of the cases of yellow fever treated by myself in Kingston, and those attended in the Naval Hospital at Port Royal, in all of which I had every reason to be satisfied with the potency of sulphurous acid in controlling the disease. In fact, the administration of this agent was so successful as to warrant my laying the subject before the profession and the public, in the hope that a more extended employment of the method may realize the expectation which I have formed of its value.

"In proof of the power of acclimatization in warding off the poison of yellow fever, and affording protection against its invasion, I may mention that during the severe epidemic of yellow fever in 1853, all the cases I met or heard of were in persons who had resided less than two years in Kingston; and this knowledge was gained by an attendance on 46 cases in private practice, and by the occasional inspection of 339 cases treated in the public hospital in the course of that year. I mention this to show the importance of giving such facts consideration when judging the causes or reasons why the Newcastle epidemic of 1867 should have been so much less fatal to those attacked by it than the fever which prevailed there in 1856.

"I may state, in conclusion, that these outbreaks of fever at Newcastle will depreciate the sanitary character of this military cantonment; in fact, it has proved inadequate to serve the purpose for which it was established. Since the illustrious Humboldt, many years ago, laid it down as a principle that the yellow-fever poison would never ascend above an altitude of 3000 feet from the sea level, implicit confidence has been placed in that dictum, but the experience gained among the troops at Newcastle during the last ten years completely negatives it; and it may probably happen that ere long the British Government will either carry out extensive alterations and sanitary reformations in this military station, or abandon it altogether as a location for white troops."

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#### THE MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

At the meeting of this Society, held on Friday, 6th September, in the Hall of the Faculty of Physicians and Surgeons, St Vincent Street, the following gentlemen were elected office-bearers for the present session:—*President*—Dr Allen Thomson. *Vice-Presidents*—Dr Coats, Dr W. T. Gairdner. *Council*—Dr Yeaman, Mr Robertson, Renfrew, Dr Dewar, Dr Tindal, Dr G. H. B. Macleod, Dr A. R. Simpson, Dr Richmond, Paisley, Dr F. Thomson. *Secretaries*—Dr James Adams, Dr Robert Perry. *Treasurer*—Dr H. R. Howatt.