

SIR GEORGE BALLINGALL.

SIR GEORGE BALLINGALL, whose loss has excited such general regret among the profession, was the son of the Rev. Robert Ballingall, minister of the parish of Forglen, Banffshire, and was born at Forglen on the 2d of May 1780. He received the early part of his education at the parish school of Falkland, Fifeshire, and afterwards attended four literary sessions, at the University of St Andrews; at which town he also served an apprenticeship to the late Dr Melville. In 1803 he commenced his medical studies at the University of Edinburgh, and was for some time assistant to the late Dr Barclay, the well-known lecturer on anatomy.

Sir George entered the army in May 1806, as assistant-surgeon of the second battalion of the Royal Scots or First Royals; which regiment he accompanied to Madras, either in 1806 or during the course of the year following. The late Duke of Kent was the colonel of this regiment, and his Royal Highness felt interested in, and showed the young surgeon great kindness, not only during his connection with the first Royals, but up to the time of his death.

In 1811 Sir George volunteered into the 22d Dragoons, and accompanied the expedition against Java, and was present at the capture of that island in August of that year, for which service he received a medal. He returned to Europe in 1814, and in 1815 he joined the army of occupation in Paris, as surgeon of the 33d regiment of foot.

In 1818 he retired on half-pay and engaged in private practice in Edinburgh. He was appointed by the Crown in 1823 to the then vacant chair of Military Surgery in the University of Edinburgh, which he continued to occupy until the period of his death. His formal connection with the army ceased in 1831.

On the accession of William IV., he accompanied a deputation from the Senatus of the University of Edinburgh, to present a local address to the King, on which occasion he was raised to the dignity of knighthood.

Sir George was surgeon to the Queen and Duchess of Kent in Scotland—consulting Surgeon to the Royal Infirmary—a Fellow of the Royal College of Surgeons, Edinburgh—a Fellow of the Royal Society—an Honorary Member of the Royal College of Surgeons in Ireland, and a Member of the Medical Societies of Paris, Vienna, St Petersburg and Berlin.

Throughout his long career, Sir George Ballingall enjoyed the confidence and esteem of the heads of the different public departments with which he was connected; a circumstance due not only to his professional knowledge and skill, but also to his upright and gentlemanly deportment in private life. Of this respect he possessed many substantial tokens, having received a splendid diamond ring from the late Emperor Nicholas of Russia, and also a silver dinner service from the medical officers of the army and navy, and of the East India Company's service. His numerous pupils in active duty in all parts of the world will, we are persuaded, join with his colleagues, and professional brethren in Edinburgh, in lamenting the loss of one so able and consistent in all his dealings.

Besides his Lectures on Military Surgery, and an able monograph on the Construction of Hospitals, Sir George frequently contributed to the medical periodicals; and we look back with satisfaction to the papers with which he so promptly enriched the pages of the present Journal, whenever any question in military surgery called for the exercise of his experienced pen.

ON THE MODE OF COMMUNICATION OF CHOLERA.

To the Editor of the Edinburgh Medical Journal.

SIR,—Dr Alison has called attention in the last number of the *Journal* to the opinions and facts of Dr Budd of Bristol, respecting the communication of cholera by dejections, and I shall be obliged if you will allow me to make a few additional remarks on the subject, partly on my own account, but chiefly to lay the matter before the reader in what I conceive to be its true aspect. I arrived at

the conclusion in the latter part of 1848, that cholera is communicated by the evacuations from the alimentary canal, and in August, 1849, I endeavoured to establish this point by a number of facts, which I published in a pamphlet, "On the Mode of Communication of Cholera." In the following month, Dr William Budd published a pamphlet "On Malignant Cholera" in which he expressed views similar to my own, and made a full and handsome acknowledgment of my priority in more than one place in his essay. I feel sure that Dr Alison was not aware of these circumstances, or he would have mentioned my name in connection with his subject.

In his recent papers in the *Association Journal*, Dr William Budd attributes a much greater range to the action of the cholera poison through the air, than I am willing to admit, and if he can establish this point, the credit of it will be due to him. In my opinion, the cholera poison only produces its effects through the air when carried by insects, or when the evacuations become dry, and are wafted as a fine dust. I have on several occasions, since the autumn of 1849, alluded to the great mortality from cholera amongst the mining population of this country, as an instance in which the morbid matter of the disease is swallowed with the food. As the miners stay in the pits eight or ten hours at a time, they always take food down with them, which they invariably eat with unwashed hands, and without knife and fork. There are no privies in the pits, and Dr Budd himself alludes to the foul state of the latter. When a case of cholera or choleraic diarrhœa occurs in a pit, it must therefore almost of necessity happen that the hands of many of the workmen would be soiled by the evacuations, minute quantities of which would be swallowed with the food. Dr Budd has alluded to the food of the pitmen being supplied from very different sources, and prepared by different hands; but the hand by which the food is contaminated is as often that from which it is eaten, as that by which it is prepared. This mode of taking minute quantities of poison was pointed out by Dr Christison long ago as being the way in which house painters of uncleanly habits, sometimes acquire lead colic.

In the very interesting cases which Dr Budd has related of propagation of cholera in the ill kept privies of a large workhouse, the same mode of communication of the disease could not fail to exist. The seats would be soiled by the cholera discharges, and the paupers who came afterwards would have neither the desire nor the opportunity to wash their hands after each visit to the place.

The mode of communication of the disease which I am advocating also, explains many circumstances in the history of cholera, which could not be explained by effluvia from the evacuations. I allude to the spreading of cholera in the crowded habitations of the poor, who cook, eat, and nurse the sick in the same room, and pay little attention to cleanliness, and to its not spreading in the houses of the well-to-do; also to the escape of the medical and clerical visitors, who do not eat or drink in the room of a poor cholera patient, and who carefully wash the hands when required, whilst the social visitor who comes to see the patient, or to attend his funeral, often suffers.

Dr Budd entirely agrees with me that the cholera poison is produced only in the alimentary canal, and acts only on that canal, which it reaches by being swallowed. He enforces this point by the same arguments that I had used, adding indeed some additional illustrations; so that in fact there is no difference between us respecting the essential mode of communication of the disease, but only as to the extent to which it is communicated through the air.

I would gladly say much more on the pathology of cholera as bearing on the mode of its communication, but I am afraid of making this letter too long. I will only say in conclusion that, should the views I first promulgated be exactly correct, the extension of cholera may be more easily prevented than it would be if the slight modification of these views introduced by Dr Budd were true. In

the former case all that would be required to prevent the disease would be such a close attention to cleanliness in cooking and eating, and to drainage and water supply, as is desirable at all times.—I am, Sir, your obedient servant,

JOHN SNOW, M.D.

18 SACKVILLE STREET, LONDON, 14th Dec. 1855.

[We regret that from want of space, we have been compelled to abbreviate Dr Snow's letter. The important points, however, have been retained. His theory that it is chiefly or almost exclusively by *swallowing* that the poison of cholera is taken in, can scarcely be supposed, notwithstanding his arguments, to be the usual mode of admission of the poison in the numerous cases which he, as well as Dr Budd, seems to suppose to have extended by the people using the same *privies*. Dr Alison, in former papers, in which he maintained the contagious property of cholera, has, however, expressly said that he gave no opinion as to the *mode* or modes in which the poison, thrown off by the human body, may be taken into another—only as to the question whether, in one way or another, it may be so thrown off and may be so taken in, and the *epidemic extension* be thus affected; and, therefore, if as Dr Alison believes, there are different modes of extension, multiplication and absorption of the poison, demanding a certain multiplicity and variety of practical precautions—this will be all in favour of the only practical opinion Dr Alison has given on the subject.]

VARIETIES.

FOREIGN HONOURS.—The Sultan has conferred the third class of the imperial order of Medjidieh on Dr Sandwith, with honourable mention.

FOREIGN APPOINTMENTS.—Dr Ludwig, Professor of Anatomy and Physiology at Zurich, has just been appointed Professor of Physiology and Zoology to the Medico-Chirurgical Academy of the Emperor Joseph at Vienna.

Dr J. Vogel, Professor of Clinical Medicine at Giessen, is appointed to the same Chair in the University of Halle, in Prussia.

Dr Felix Niemeyer, of the Hospital of Magdebourg, has been called to the Professorship of Clinical Medicine in the University of Greifswald (Prussia).

By decree of the Emperor of Austria, Dr Rigler, Professor of Clinical Medicine at the Turkish University at Constantinople, has been appointed to the same Chair in the School of Medicine at Grätz, in Austria.

The Academy of Sciences proceeded, at its *séance* of the 3d of December, to nominate a Corresponding Member to the section of Medicine and Surgery. At a preliminary meeting, Marshall Hall had been placed first in the list of candidates; Rokitansky, second; Professor Christian of Edinburgh, third; M. Ribéri of Turin, fourth; and Chelius of Heidelberg, fifth. Of 41 votes, Marshall Hall secured 39, and was declared duly elected to the seat vacant in consequence of the death of Fodera.—*Gaz. Médicale*, Dec. 8, and *Gaz. Hebdomadine*, Dec. 7.

At an extraordinary meeting, of the 25th November and 2d December, the Professors of the College of France agreed that the order of names in the list of presentees to the vacant Chair of Majendie should be as follows:—1st, M. Claude Bernard; 2d, M. Longet.—*Gaz. Médicale*, Dec. 8.

Dr Horace Green has resigned the Professorship of the Theory and Practice in the New York Medical College, but will lecture on the Diseases of the Thoracic Organs. Dr Cox has been appointed to the vacant Chair.