Original Communications.

REPORT ON VACCINATION AS PRACTISED AT THE LIVERPOOL STATION OF THE NATIONAL VACCINE ESTABLISHMENT.

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[Read before the Liverpool Medical Institution.]

RECENT inquiries into the history and practice of vaccination, have shown, contrary to what might have been expected, that England, the birthplace of the immortal Jenner, the country in which his great discovery was first promulgated, has been far behind most other European nations in adopting means necessary to promote the extension of that inestimable boon. Full and conclusive evidence of this want of sanitary care on the part of our government, will be found in the able and interesting report of Mr. Simon, contained in a Blue Book on Vaccination, issued by the General Board of Health in 1857; from which we learn that, at that period, when forty years had elapsed since Jenner's discovery first became an accepted part of medical science, arrangements, more or less complete, had been made throughout the continent of Europe to render it of universal application; and its triumphs were everywhere recognised.

During eight successive years in the Grand Duchy of Baden, and during thirteen consecutive years in the city of Copenhagen, no single death from small-pox had occurred. But while foreign governments were thus fulfilling the aspirations of the English surgeon, and, by vast economies of human life, were realising the new source of national strength which his genius had given to mankind, in Jenner's own country there was less progress to be traced; in the three years which elapsed from the establishment of the General Register office in 1837 until 1840, nearly 36,000 deaths by small-pox were recorded in England. Some slight advance was at that time made by the passing of the Vaccination Extension Act; and a still further reduction of mortality followed the subsequent enactment of the Compulsory Vaccination Bill in 1853; but we are yet far from having reached the greatest attainable degree of security; and the death-rate from small-pox in this country is much higher than it need be, if infantine vaccination were carried out in the best possible manner.

The observations of Mr. Marson, of the London Small-pox Hospital, extending over several thousands of cases, of which he has kept accurate notes, originally published in the thirty-sixth volume of the *Medico-Chirurgical Transactions*, and which will be also found in the blue book already alluded to, prove, almost to demonstration, that the mortality from small-pox in England is, to no insignificant extent, traceable to the imperfect manner in which vaccination is sometimes performed. Of 30,094 vaccinated persons whom he has seen suffering from small-pox, only 268 presented what he considered the marks of thorough vaccination.

The number of foreigners admitted, in a series of years, into the Small-pox Hospital, has enabled Mr. Marson further to observe that, as a rule, vaccination is much better performed abroad than in England; that, in fact, it is far less satisfactorily performed in England than in any other country in Europe. It appears to be performed in the best possible manner by the Danes, Swedes, and Norwegians, then by the Germans, then by the Italians, then by the Spaniards, and lastly by the

English and French. I will not occupy your time by quoting the figures by which Mr. Marson has arrived at these most important conclusions; but would refer any who are sceptical on the point to the published records themselves, which afford evidence that I think must carry conviction to any unprejudiced mind.

The foregoing recorded observations, together with other facts bearing on the subject, brought to light by the researches of Mr. Ceely, Dr. Seaton, and others, have shown clearly that the whole system of vaccination in England is in an imperfect and unsatisfactory position; and that there is much to be done before the population of this country can enjoy the fullest attainable degree of safety which Jenner's immortal discovery is calculated to afford.

It is, however, consolatory and encouraging to know that the section of the legislature which is responsible for the sanitary condition of the people is fully alive to the actual state of matters; and that measures are already in progress, having for their object the removal of every difficulty which at present obstructs the extension of vaccination, and which are calculated eventually to establish it upon a thoroughly sound and efficient basis.

Having succeeded in obtaining the most stringent powers a government so sensitively jealous of the liberty of the subject as ours could be induced to grant, for the purpose of enforcing vaccination in all cases where, from ignorance, prejudice, or superstition, it was persistently resisted,—the Board of Health, in conjunction with the National Vaccine Establishment, next directed their attention to the best means of securing two main conditions, essential to the success of the object in view: First, to provide a free, abundant, and uninterrupted supply of vaccine lymph of undoubted purity and efficiency; and, secondly, to make such arrangements as would secure the thorough competence and special qualification of every person who should occupy the position of a public vaccinator. It will be seen at once that the authorities were bound in justice to the public to carry out these two conditions; for having called upon the people, under pains and penalties, to have every child vaccinated within three months after birth, it was certainly incumbent upon them to afford a guarantee that the compulsory operation should, in every case, be performed in the best possible known manner. Additional sources of lymph supply had been rendered necessary by the diminution in the resources of the central station of the National Vaccine Establishment, which had been gradually decreasing ever since the introduction of the parochial system of vaccination in the metropolis, which, by subdividing the cases amongst numerous local stations, so greatly diminish the numbers of the original central establishment that the supply was quite unequal to the demand. This circumstance is deserving of notice, as an illustration of the evils which may arise from too great a subdivision in any system of public vaccination; it, in fact, constitutes one ground upon which the authorities rest their strong objection to any unnecessary increase in the number of stations in any given district; and especially to the scheme which has sometimes been suggested, to do away with official public stations altogether, and to make every qualified medical practitioner a public vaccinator; a proposal which, if carried out, would, in addition to many other serious disadvantages, greatly increase the difficulties already experienced in keeping up a national supply of lymph, and would, in all probability, eventually deprive the profession and the public of any reliable source whatever from which genuine cowpock matter could at all times be procured.

The second condition, namely, the necessity for making some systematic regulation to secure the qualifications and efficiency of public vaccinators, was evident; first, from the ascertained existence of a considerable

amount of imperfect vaccination throughout the country; and, secondly, from the circumstance pointed out by Mr. Simon in his report, already quoted, that heretofore there has existed in this country no general test of medical proficiency which implies a knowledge of vaccination. Nor have we any medical school where vaccination is systematically and practically taught, so that a medical student might complete his curriculum, obtain his diploma, license and degree, as physician, surgeon, apothecary, and doctor, might be eligible, and actually elected for the appointment of public vaccinator, and meanwhile may never have performed, perhaps even never have witnessed, one single act of vaccination.

To remedy these defects, therefore, the two bodies before mentioned, namely, the Board of Health and the National Vaccine Establishment, acting conjointly, established in every town where there is a medical school, a vaccination station; for the two-fold purpose of providing a regular supply of lymph for transmission to the National Establishment in London; and, where a sufficient number of cases of vaccination could be performed every week, to constitute an efficient means of giving practical instruction in vaccination to students.

One or more public vaccinators were appointed to each station, and were authorised to give instruction and grant certificates of proficiency in vaccination; such certificates constituting, in addition to a regular medical qualification, an essential requirement in all future appointments of public vaccinators.

It would naturally be supposed that measures so reasonable and beneficial, and apparently so much needed, would have met with universal support from our liberal and enlightened profession; not so, however,—for the College of Surgeons, with strange inconsistency, first fell into the scheme, and promised its entire and cordial support, and very soon afterwards adopted measures calculated, in a great degree, to defeat and obstruct the intentions of the authorities. One medical practitioner, a man of provincial celebrity, published a letter in all the medical journals, in which, in allusion to the regulations we are speaking of, stated that “considerable anxiety and alarm existed, in the minds both of surgeons and medical students, as to certain regulations respecting certificates of vaccination.” He appeared to consider that, by making vaccination a special branch of medical instruction, and providing special teachers and efficient means of giving clinical instruction therein, the rights and privileges of the members of the College of Surgeons were infringed upon; although how such an argument could apply to the point in question any more than to the existence of professorships and teachers of anatomy, surgery, or any other recognised division of medical education, is not, I think, quite apparent.

Shortly after the publication of the new regulations, the *Lancet* launched forth a voluminous leading article ridiculing and abusing the whole plan, and dwelling, with much emphasis, on the impropriety of the Privy Council presuming to interfere in a matter which belonged exclusively to the functions of the Medical Council, under the Medical Act. In this matter, however, as in some other memorable instances, the editor of the leading medical journal exhibited his own want of discretion in venturing to dogmatise upon a subject, with the details of which he had failed to make himself so fully acquainted as his duty as a public journalist demanded.

So far from infringing upon the privileges or duties of the Medical Council, the first step taken by the Privy Council was to write to Sir Benjamin Brodie, president of the former body, stating the result of their inquiries, and pointing out the necessity for some action in the matter, with the expectation, of course, that the Medical Council would take up the question. The reply, however, was to the effect that, although the Medical Council fully appreciated the importance of the sugges-

tions to them, and quite agreed with the Privy Council that immediate steps should be taken to remedy the defects pointed out, nevertheless, they did not see how they (the Medical Council) could undertake to do anything in the matter. Thus, it was evident, that unless the whole question was to be lost sight of, the Privy Council were called upon to take it in hand.

[To be continued.]

Transactions of Branches.

BATH AND BRISTOL BRANCH.

CASE OF CYANOSIS, IN WHICH THERE WAS A COMPLETE COMMUNICATION BETWEEN BOTH AURICLES AND VENTRICLES.

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[Read Nov. 28th, 1861.]

THE young man from whom this specimen was taken, was 18 years of age at the time of his death. He was boyish in appearance, and short in stature, being scarcely five feet in height. His height, however, was diminished by a considerable antero-posterior curve of the spine in the interscapular region. His hair was of a very light flaxen colour; in fact, almost as white as that of an albino. The irides were of a pale blue colour. His complexion was very fair, and presented a distinct livid hue, which became very apparent on his making any exertion. The lips, gums, and mucous membrane of the mouth, were of a deep purple colour. The temperature of the surface was low; the extremities were cold, and the nails of a dark livid hue.

As regards his bodily functions; although able at times to walk four or five miles without fatigue, he was incapable of any rapid movement; and lost his breath immediately, if he attempted to run. He was very susceptible of changes of temperature; and suffered very much from cold.

With respect to his mental faculties, he displayed a fair amount of intelligence, and was tolerably quick at learning; but was not more advanced than most boys of 15, because he was never allowed to study much, nor long together. Until the early part of last winter, he had always enjoyed fair health, and had passed favourably through the usual children's complaints.

Towards the end of November 1860, he was attacked with acute rheumatism, which ultimately affected the heart. A loud *bruit de soufflet*, with the first sound of the heart, was then heard for the first time. Before this there had been nothing unusual in the heart-sounds. His health now began to break down; and from that time he never left his room. He suffered much at times from dyspnoea, and other symptoms connected with the heart, as well as from occasional severe pains in the limbs, and facial neuralgia.

In May 1861, he was attacked with pleuropneumonia on both sides of the chest, from which he rapidly sank, and died on the 29th of that month.

On making a *post mortem* examination, a considerable amount of fluid was found in the cavity of the right pleura; together with much engorgement and hepatization of the lower lobe of the lung. Similar appearances were observed on the left side; but not to so marked a degree. The heart was not quite so large as that of an ordinary adult; it was much gorged with dark blood, which gushed out in great abundance as soon as the *venæ cavæ* were divided, when the heart at once collapsed and became empty. The pericardium was normal in shape and size, and nowhere adherent. On taking a superficial view of the heart, I observed that