The ship is required to be disinfected, and other precautionary measures have to be adopted as regards drinking-water, bilge-water, infected articles, dead bodies, etc., after which she is at once released.

The only instance in which any further measure of restriction can be applied is as to persons on board a ship which, though not infected with cholera, either carries passengers who are in a filthy or otherwise unwholesome condition, or have come from a place infected with cholera. If in any such case the medical officer of health deems it necessary to intervene, with a view to checking the introduction or spread of cholera, he is required to give a certificate to that effect. When such certificate has been given, no person is allowed to leave the ship unless he satisfy the medical officer of health as to his name, place of destination, and address at such place, such information to be utilised in the same way as in the case of a ship certified to be infected with cholera. But beyond this, there is no right of interference either with the vessel or with those on board.

The English Cholera Regulations do not profess to be so framed as to prevent all chance of the importation of cholera into the country. They aim at detection and arrest of all actual or suspected cholera at our ports, and at giving the earliest possible warning to inland authorities as regards particular persons about to arrive in their respective districts. If, in spite of these measures, the disease should be imported, every sanitary authority has the responsibility for the maintenance of conditions which should enable them to deal with imported cholera in such a way as to prevent its extension.

2nd. Yellow Fever and Plague.—These two diseases still remain subject to the Quarantine Act, 1825, and to Orders in Council made subject to that Act; that is to say, to legislation of an earlier period than that which regulates our action with regard to infectious diseases current in the country. Cases of yellow fever rarely reach our shores. The only occasion on which, during the past generation, the disease gained any footing in this country, was in 1865, when the cases were dealt with by the local sanitary authorities on the same principles which commonly govern their action in dealing with the fevers which are endemic with us.

Plague is not known to have been a cause of disease or death in England for some 200 years.

THE NOTIFICATION OF MEASLES.—The Sanitary Committee of the Newcastle Town Council have declined, by the narrow majority of one, to recommend that measles should be added to the list of notifiable diseases. This decision is regrettable, as it is in large towns with efficient sanitary staffs and ample hospital accommodation that the desirability of notifying measles will need to be first demonstrated before its general adoption.

INOCULATION FOR SMALL-POX AMONG THE CHINESE.

By EDWARD HENDERSON, M.D., Edin.,
Medical Officer of Health, Shanghai.*

INOCULATION of small-pox is to-day a practice very generally followed by the Chinese throughout the Empire. In Europe, though at one time extensively practised, it was superseded by vaccination shortly after the beginning of the century. The object of inoculation is the same everywhere—the production of a mild form of the disease at a favourable time in the life of the individual. Small-pox was at one time considered in Europe as a disease which could scarcely be avoided—a nearly certain occurrence sooner or later in the life of everyone; and it is still so regarded by the inhabitants of China. Viewed in this way there is, of course, nothing better to be done than to get it over as soon and as safely as possible. In Europe the contents of the pustules, taken from a mild case of the disease, were introduced into the system through the skin, much in the same way as we now introduce vaccine lymph. It was, on the whole, a practice to be commended, resulting as it did in the saving of many lives which would otherwise have been sacrificed to the disease naturally contracted. In China the dried and powdered crusts, taken also from a mild case of small-pox, are introduced into the nostril on cotton wool. As to the results obtained in China statistics are altogether wanting, but it is confidently asserted by the natives that their method is attended with little risk, and is the means of saving many lives. In the absence of statistical information, and wanting scientific proof by experiment, it is impossible to decide whether, for the purpose of producing a mild form of small-pox, it is best to introduce the poison through the skin, or to allow it to filter through the delicate membrane lining the air passages; whether, indeed, in the case of small-pox, the method of introduction matters at all. It is commonly believed that inhalation, the breathing of air containing the virus, is the “natural” mode of contracting of small-pox; and that therefore the Chinese plan of inoculation, which apparently aims at its introduction in this way, is probably the one most dangerous to life. On the other hand, we might suppose that the crusts, which if left to themselves, would in the end absolutely perish, might have their virulence attenuated by age and desiccation; and that thus the vehicle selected in China might possess an advantage over that chosen in Europe; but as to this we know nothing with certainty. Possibly the Chinese and European methods are not after all as dissimilar as would at first appear, it being unlikely that pledgets of cotton can often be introduced into the nostrils of children without causing, or coming in contact with, minute abrasions of the skin or mucous membrane. On

* From a Special Report to the Shanghai Municipality.

the whole, I believe that the inoculation of small-pox as practised in China, results in the saving of life, much in the same way, and possibly much in the same degree, as it did formerly in Europe. It seems unlikely that a practice of such antiquity, which is still at the present date so extensively followed, can be attended with much immediate risk of life.

The following additional particulars regarding the practice of inoculation among the Chinese in and around Shanghai, I take in a slightly modified form, from the memorandum which I addressed to the Council in the end of 1869:—

1. In the absence of vaccination the practice is as nearly as may be universal.

2. In Shanghai and the surrounding district, the 11th, 12th, 1st and 2nd moons—say December, January, February, and March—are invariably selected for its performance, the object being to secure cold weather during the subsequent development of the disease.

3. Children only are inoculated; the age varies from three months to a year; when older children are submitted to the operation it is usually because earlier attempts have failed.

4. The full constitutional manifestation of small-pox is considered essential.

5. Inoculation is practised as a branch of the regular medical profession, those who engage in it devoting themselves to it exclusively.

6. Some thirty or forty native doctors have been employed in this work during the past few months in the native city and surrounding villages, and to some extent within the municipal limits. From information lately received, I learn that three of these professional inoculators live in the foreign settlement.

7. The fee paid for inoculation varies. An average charge is two dollars for a boy, and one dollar for a girl.

Unmodified small-pox being probably of all the eruptive fevers the most highly contagious, widely diffused, and dangerous to life; and these characteristics of the disease, owing to the ignorance and carelessness of the inhabitants, having unusually free scope for their development in China, the Government might well hesitate to prohibit the practice of inoculation, until some assurance could be obtained that the people were prepared to accept vaccination in its stead. In dealing with the masses of China this doubtless is a proper position for the Government to take, and formally assumed, it is one which must command respect. In the foreign Settlement of Shanghai, however, where we have to deal with but a small number of the natives, the case is altered; it is further altered by the fact that we do not seek to prohibit inoculation, we only ask that the locality in which it is practised shall be removed to a safe distance from our dwelling houses. Let the Chinese resident have his children inoculated by all means if he prefers it, but let us insist that this shall be done outside the Municipal

limits. If we are powerless to remove the developed cases of small-pox from our midst, we have at least a right to demand that the disease shall not be sown in our streets. The edict granted by the Taotai in 1870 peremptorily forbids the practice of inoculation in the Settlement, and this might still be made use of; it has certainly never been repealed. This edict was obtained by means of a joint despatch addressed to the Taotai by the several Treaty Power Consuls residing in Shanghai, and if a fresh proclamation is needed, the Council might solicit the aid of the Consular body to obtain it. The matter should, if possible, be settled soon, and certainly before the next winter brings with it a repetition of the risks to which these inoculations expose the community; it will be easier to act now, while we are still suffering from the epidemic prevalence of small-pox and its fatal consequences, than it will be later, when much that has happened during the past few months will be forgotten.

When in my first letter I said that the "prevention of inoculation" was better expressed as "the substitution of vaccination for inoculation," I intended to convey my belief that we could not interfere to any extent with a practice which, though bad in many ways, resulted in the saving of life, unless we were prepared to substitute something better in its stead. As the real aim of all legislation, the substitution of vaccination must never be lost sight of; and even the restricted action of the Council in seeking to prohibit inoculation within the limits of the foreign settlement, is one entailing responsibility which demands serious consideration. The Chinese residing in Shanghai and its neighbourhood are, I believe, on the whole ready to accept vaccination, but they are apathetic, wedded to old custom, and, for the most part, incapable of thinking out the matter clearly for themselves. To bring about the desired change completely, something more is needed than the mere approval of their magistrates, or the recommendations of their foreign friends. To reach the labouring and artisan classes now so largely represented in the Settlement, vaccination at first must be made very easy of attainment, easier than inoculation, and well within the reach of the very poorest. The first step towards the accomplishment of the task is manifestly an ample supply of vaccine lymph. The events of the past few months have shown that, so far as the wants of the foreign community are concerned, these can be met satisfactorily by imported lymph, if only a little foresight is exercised. When, however, provision has to be made for the large native population of Shanghai, the importation of lymph can no longer be depended on, and its cultivation on the spot becomes a matter of necessity. It might be supposed that the large number of infants to be vaccinated among the Chinese would simplify matters by the facilities which these give for arm-to-arm vaccination; but the experience of those

who have operated much among the natives show that it is impossible to secure the return of the children on the eighth day, when the vesicles have matured, in sufficient numbers to keep up the supply of lymph to any extent.

SMALL-POX CLINICALLY CONSIDERED.

By J. R. KAYE, M.B., D.P.H.,
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At the present time, when so much interest is being manifested in the value of vaccination, any arguments, though not original, if presented in a new form may become more forcible and convincing. The statistics of the present epidemic have

vaccinated, 2 per cent. ; with one mark, 16 per cent. ; with two, 37 per cent. ; with three, 25 per cent. ; with four 18 per cent., while 1 per cent. had five marks. Now with respect to area, I found that 63 per cent. exhibited less than the half square inch area desired by the Local Government Board. Undoubtedly much depends upon the quantity and quality of the vaccination as determined in after years by the area and distinctness of the cicatrices. The pampering and catering of some medical men to the ignorance, prejudices, and apathy of parents in making a farce of vaccination by inserting lymph in one small place are unworthy of the profession. Single vaccination, all experience goes to show, to be insufficient, and gives to

CASE 1, SMALL-POX.—Aet. 34 ; Three Vaccination Marks (two good ones, one ill-defined) ; area, 1'04 sq. ins.

proved incontestably that vaccination, properly performed, has exercised an invaluable influence on the protection of the people from small-pox, in the mitigation of the disease amongst those afflicted, and in the comparative immunity from a fatal issue. I propose to substantiate some of these facts (with the aid of photography) by ocular demonstration, but before doing so, let me digress shortly to the pivot upon which the whole question of the efficacy of vaccination is based—I mean perfect vaccination. Is it properly performed? I have personally examined the marks of a large number of children under twelve years of age with the following results given in round figures: Un-

the individual a false sense of security. Bad performance affects the principle, and the principle of vaccination should not be jeopardised for the want of more stringent measures to enforce the proper performance of vaccination.

A wholesome fear is produced amongst the inhabitants of an infected area, still there is a tendency to underrate the immense value of vaccination and re-vaccination, partly because the loathsomeness of the disease in unvaccinated persons cannot be compared with the mildness of the disease in the well vaccinated outside the hospital wards. In the following photographic prints taken by myself and selected from a large number, not