the first introductory lecture to which I listened. The lecturer brought before us a little history of medicine with short sketches of the lives of some of the great ones of the past. He fired my young mind with enthusiasm; most earnestly do I desire that what I have said to-day may have had in some degree a like effect on yours. I have endeavoured to place before you a high ideal, and have tried to present to you the profession which you have chosen as one of the noblest of man's vocations. I hope I have said nothing to discourage any. If it has seemed my duty to insist on a comprehensive range of study, it has been from a deep conviction that it is the only sure road to success. Let me beg of you to take courage, to give to the profession of your choice your whole hearts, and to feel assured of victory. The pursuits of medicine do not as a rule lead either to public honour or to great wealth. Should there be anyone here whose heart is set on either of these, let me advise him at once to seek another calling. If, however, a moderate competence and the gratitude of your patients are sufficient, if high thinking and plain living have their charms for you, then I believe that there is no vocation in which your life's ideal may be pursued with greater confidence. To all of you to whom these limitations are acceptable I desire in the old-fashioned phrase to wish most heartily God-speed.

ON A DOUBTFUL CASE OF RECURRENT SMALL-POX.

By ARTHUR NEWSHOLME, M.D.LOND.,
Medical Officer of Health, Brighton.

EARLY in 1895 a case of small-pox was notified to me, the patient being a needlewoman, who started with small-pox on February 20th. The only clue discoverable was that she was employed in mending the carpets in the rooms occupied by Mr. W. L., who a short time previously had come to the town after being discharged from a metropolitan small-pox hospital. That this was the true clue was in a few days rendered more probable by the notification of a case of small-pox in the person of a charwoman living in a different part of the town from the first patient. The onset of this second case was on February 25th, and making due allowance for the period of incubation, she could not have acquired the disease from the first charwoman. Both women had been employed in the room occupied by Mr. W. L. There were no other cases of small-pox in the town at the time. The history of the gentleman who appeared to be responsible for these two cases was as follows. I am informed by Dr. Sykes, M.O.H. St. Pancras, in whose district the patient lived, that "Mr. W. L. was taken ill with small-pox on December 29th, 1894, at his office in the City, and was sent direct from his office to the Highgate Small-pox Hospital. This hospital is in Islington. I presume that the clothes he went in were disinfected by the hospital authorities. His room was fumigated on January 1st. All the clothes, bedding, and other articles in the room were disinfected by steam on January 3rd. In the course of next week the room was stripped, cleansed, and redecorated. He was discharged from hospital on February 2nd, and left London on the same day."

The resident medical officer of the Highgate Hospital wrote to me: "W. L. was admitted here with small-pox (modified confluent) on December 29th, 1894, and discharged on February 2nd, 1895. Every precaution was taken, and all his things were disinfected. I am unable to explain, if he is the cause (of the above two cases), why he should have carried the infection. Relapse from small-pox is rare, I believe."

On February 5th Mr. W. L. went to the house of a Dr. X. to consult him on account of a papular rash. The papules were scattered about the trunk, and were probably less than twenty in number. Dr. X. writes me that "those which afterwards developed upon the face, though more crowded, were also about the same number. I feel sure there were none on the limbs. My first impression was that they suggested chicken-pox.....What they most resembled was ordinary acne papules becoming pustular, and most of them were on the face and back of shoulders where acne is commonly seen. There were none on the face on February 5th. On the 6th they first appeared on the face, and because of this Mr. W. L. remained in the upstairs drawing-room. The

carpet woman worked for some time in this room while he was sitting at the opposite side of the room. The eruption on the trunk was dying upon February 8th, that on the face was disappearing on the 11th.....I examined a sebaceous cyst on Mr. W. L.'s back in the above-mentioned drawing-room on February 6th, and some of its contents spirted on the carpet. Mr. W. L. had gonorrhoea before he had variola, but it was nearly well when he entered hospital. On February 6th the discharge reappeared, and continued up to the 12th, when I last saw him, though but scanty. The temperature on February 5th was 97.8°; 6th, 97°; 8th, 97°. As regards vaccination, I regret that at this distance of time, I can only state that my recollection is that Mr. W. L. had indistinct marks of infantile vaccination, but had not been revaccinated."

The alternative theories appear to be that either (a) there had been some accidental omission in the measures of disinfection taken, or that infection had lurked in the sebaceous cyst mentioned above; or that (b) the patient had not small-pox when admitted into the Highgate Hospital, but caught it while there, developing a very mild attack after his discharge; or that (c) the patient had a *bonâ fide* second attack after his discharge.

The carriage of infection by articles of apparel, etc., which had not been efficiently disinfected, appears highly improbable, in view of the preceding statements by the Medical Officer of Health for St. Pancras and the resident medical officer of the hospital. Nor do I think that the view that the infection lurked in the contents of the sebaceous cyst is likely to be correct.

The second supposition involves an error of diagnosis on the part of both the notifying practitioner and of the resident medical officer of the hospital, which is highly improbable. The third supposition is, in my opinion, the correct view of the case.

If the patient had a secondary attack of small-pox he might presumably have caught it from other patients in the hospital, or it might be a case of auto-reinfection. In Dr. Ross's case (see below) the latter supposition appears to be the only tenable one. So it is also in relapses of typhoid fever, and in some cases of relapse of scarlet fever.

I was under the impression that recurrent cases of small-pox were unknown until Dr. Davies sent me the case recorded below, and appended extract from Dr. Edwardes's work (see p. 1033). Dr. Gayton, a well-known authority on the subject, wrote me in connection with the above case that "I never heard or read of such a thing as the possibility of a relapse in small-pox, nor do I believe that this ever takes place." The possibility of such relapses is ignored in all the textbooks on medicine and on fevers to which I have had access.

ON A CASE OF RECURRENT SMALL-POX.

By G. S. DAVIES, M.D.LOND.,
Medical Officer of Health for Bristol.

G.C., aged 28, was admitted to the St. Philip's Hospital on November 17th, 1887, suffering from a discrete attack of small-pox. He had been vaccinated in infancy, and was stated to have been unsuccessfully revaccinated some years before this attack. On admission the eruption was well developed, and the patient progressed favourably until November 24th, when initial symptoms, comprising intense headache with high fever, occurred. A second crop of typical papules appeared in due course. These vesiculated and pustulated, the pustules remaining out until December 7th, when they commenced to dry away; in fact, he passed through an ordinary second discrete attack. He ultimately made a good recovery, and was discharged cured December 31st, 1887. No marked secondary fever occurred in either of these attacks.

ON RECURRENT CASES OF SMALL-POX.¹

By THE LATE J. HARRIS ROSS, M.D.

It has generally been considered that an attack of any of the zymotic diseases gives immunity for life from further attacks; but I think that the cases which I am about to relate will prove that this is not always the case.

¹ A paper read at the Brighton Medico-Chirurgical Society in 1887.

Miss —, an opera singer, consulted me on December 28th, 1886, for a general feeling of weakness and *malaise*, which was a condition quite unusual to her. She told me that she had recently been in the Portsmouth Sanatorium, suffering from small-pox. She had been discharged on the 23rd, and had come to Brighton to recruit her health. On January 3rd following I found her hot and feverish; on the morning of the 4th she was worse, and complained of pain all over her, could not fix any place in particular; temperature 102.6°, pulse 108; skin hot and dry; in the morning temperature 104.4°, pulse 120. Some spots could now be seen on her face. On the 5th, spots on her face, back, legs, and arms, feverish symptoms had subsided, and she felt much more comfortable; spots felt hard and papular, and numbered about forty. Next day they became vesicular, and although I have never heard of a patient having a second attack of small-pox so soon after the first, I was convinced that my patient was suffering from that disease, and that if she had had it previously this must be a second attack. As I had some doubt about the first attack, I wrote to Dr. Mumby, the Medical Officer of the Portsmouth Sanatorium, and reported the case to him, and asked him if he would kindly give me particulars of the patient's illness in the sanatorium. He replied as follows:

Dr. J. H. Ross.

January 21st, 1887.

DEAR SIR,—I was called to see Miss — in consultation on November 19th, when I found her suffering from undoubted variola. The eruption had then been out some days (four or five), and was becoming pustular. There was not then much fever, and there was not at any time much secondary fever, but I found a large amount of inflammatory swelling around the pustules, with enlargements of the lymphatic glands. She passed through the various stages of the disease from that time very favourably, and left on December 23rd for Brighton.

Hers is a most singular experience, the like of which I have never heard before—to have two attacks of small-pox within two months seems almost incredible, but I can answer that her first attack was genuine, as well as you, no doubt, can answer for the second.—I am, yours very faithfully,
B. H. MUMBY.

As I have had considerable experience in the treatment of small-pox, having had charge of a special hospital in this town during a severe epidemic in 1870, which was reported in the *Lancet* in 1871, and having also had to deal with two or three milder outbreaks, I can guarantee that the second attack of Miss — was a typical case of variola discreta. She had little secondary fever, made a good recovery, and left to resume her duties in February, looking little or none the worse for her misfortunes. There were several children in the house as well as adults. The former had been well vaccinated, and I revaccinated the latter, isolated the patient, and took all necessary precautions for disinfection. I am pleased to say no further mischief resulted from the lady's visit to Brighton. She had two very imperfect vaccination marks. She told me that she was in a ward by herself in the sanatorium, but that a few days before she left the nurse told her that some sailors had been admitted into the hospital suffering from small-pox, and the nurse who attended them sometimes came into her ward and talked to her. Did she infect herself or did she take the infection from the nurse? As the period of incubation is from twelve to fourteen days, she must have contracted the second attack previously to leaving the sanatorium.

The above case has reminded me of two others that have occurred in my practice.

In 1870 I attended a young lady, aged 9 years, who had a severe attack of scarlet fever. Just as desquamation was finished, and she was looking forward to going out, she failed a second time, and had a very severe attack, complicated with pericarditis and endocarditis. Desquamation took place a second time. No other person about her had scarlet fever either before or after. I saw her two months ago; her heart then appeared to be quite sound.

The third case was that of a mechanic who worked for the railway company, and whom I attended for typhoid fever in November and December, 1875. I concluded he had contracted the disease at Croydon, as he had been doing work there, and typhoid was then very prevalent at Croydon. He made a good recovery. No one else about him had fever, but in a month's time I was again sent for, when he had a second attack, for which I attended him up to the end of March. I could find no source from which he could have absorbed the poison except from himself.

These cases do not appear to me to be of the nature of a

relapse, but rather to bear out the theory of auto-infection; for, with the exception of the chance of infection from the nurse in the small-pox case, the patients were subject to no other infected source but what was generated by themselves.

EXTRACT FROM DR. EDWARDES'S WORK ON SMALL-POX AND VACCINATION.²

The Protection Conferred by Small-pox Itself.—But before examining into the protection conferred by vaccination, we must first examine that conferred by an attack of small-pox itself. The first conclusion of the German Commission runs thus: "With rare exceptions one survived attack of small-pox confers immunity against any subsequent attack." Thus small-pox does not absolutely and universally protect against itself. Even third attacks in the same individual have been recorded. Dr. Koch told the Commission that he himself had seen a patient in a third attack of small-pox, which proved fatal. Professor Hebra, of Vienna, had attended this man in the two previous attacks. Professor Wunderlich, whose writings on clinical thermometry are known to the whole civilised world, and who is called by Koch "a reliable and exact observer," asserts that he saw one patient have two attacks in the same epidemic. This is the only instance, on good authority, of an early second attack, and it remains a curiosity in medical literature. "No doubt most alleged cases of second attack rest on mere hearsay, or on diagnostic error."—Koch. Amongst 22,641 small-pox cases in German military hospitals in 1871-2 only one second attack is recorded—a man had a slight form of small-pox three months after a severer form. Dr. Krieger saw one certain second attack in 500 observed cases; two more were doubtful. Dr. Reissner found no second attack in 12,000 cases. Bousquet collected 34 second attacks amongst 16,051 cases of small-pox during thirty epidemics. Dr. Siegel reported 26 such in 3,188 cases in Leipzig in 1871. Wunderlich found 22 second attacks in 1,727 cases in Leipzig, in 1871, and 6 of these were fatal. (The early second attack has been already mentioned.) In former times all cases of second attack were reported as having occurred in children, or persons a little older—never in adults. This clearly points to error in diagnosis (Reissner). So much for the protection afforded by small-pox itself—not an absolute one, after all.

ANTISTREPTOCOCCUS SERUM IN PUERPERAL FEVER.

By R. G. MCKERRON, M.A., M.B.,

Obstetric Physician, General Dispensary; Assistant to the Professor of Midwifery, University, Aberdeen

WITH the treatment of septic infection by antistreptococcus serum still on its trial, it is important that in all cases in which the serum has been tried, whether successfully or not, the results should be put on record, in order that its true position and value as a therapeutic agent may be early established. On that ground the three following cases are communicated:—

CASE 1.—Mrs. F., aged 22, 11-para; delivered on July 14th at 9 P.M. Labour of normal duration and progress till head reached inferior pelvic strait, when, as delay occurred, forceps applied and delivery easily completed. As the perineum was inelastic and non-distensible from a severe laceration at previous confinement, a right lateral incision was made to prevent rupture into the rectum. Edges of incision brought together by a single catgut suture. The strictest antiseptic measures were enjoined on the students who attended the case with me. Great care was exercised in the after-treatment. Convalescence was very satisfactory till the beginning of the second week. The accompanying chart shows no rise of temperature till the evening of the 23rd, when there was a slight elevation—attributed to excitement. Next morning thermometer recorded 100°. On examination perineal wound looked quite healthy; discharge free, but not offensive; uterus felt 2 inches above the pelvic brim; compression of the fundus caused discharge from the vulva of lochia and gas. Vaginal examination showed uterus soft and larger than normal with patulous os. Uterine douches of sublimate 1 in 4,000 ordered twice daily, and patient put on quinine and brandy.