there be any such, will be detailed from the Western Command and serve for one year.

Burma Division.—The establishment for Burma will, until further notice, consist of 18 executive officers—viz., two lieutenant-colonels, five majors, and 11 captains and lieutenants. These officers are in future to be taken from the Eastern Command and the 9th (Secunderabad) Division in the proportion of three-fifths from the former and two-fifths from the latter area. The General Officer Commanding, Burma Division, will notify direct to this Division the number of officers (by ranks) required for the annual relief. This intimation should reach Simla not later than July 31st in each year. On receipt of above the Principal Medical Officer of His Majesty's Forces in India will detail the officers by name for service in Burma. Officers who have completed two years' service in Burma will be eligible for hill stations in their respective Command or Division on return thereto. Extension of service for a period not exceeding one year may be granted by his Excellency the Commander-in-Chief if recommended by the local authorities. Unattached officers of the Indian Medical Service, should there be any such, will be detailed from the Eastern Command and Secunderabad Division, their term of service being two years.

In consequence of the foregoing changes the establishments of *personnel* in the Commands and independent Divisions affected will be revised as follows with effect from Oct. 1st, 1906, those of the Royal Army Medical Corps executive officer being: Northern Command, 88; Western Command, 90; Eastern Command, 88; Secunderabad Division, 40; and Burma Division, 18; total, 324.

With reference to foregoing orders the following reliefs will take place during the present trooping season:—*Aden Reliefs:* The undermentioned Royal Army Medical Corps officers, at present serving on the strength of the Northern and Western Commands, are directed to proceed to Aden for a tour of service, the services of these officers when travelling by Government transports being utilised. *From Northern Command:* Lieutenant-Colonel C. C. Reilly, by *Assaye* leaving Bombay Dec. 7th, 1906; Captain J. F. Whelan, by *Plassy* leaving Bombay March 6th, 1907; and Captain T. F. Ritchie, by *Assaye* leaving Bombay Dec. 7th, 1906. *From Western Command:* Major F. G. Faichnie, by *Plassy* leaving Bombay March 5th, 1907; Captain M. J. Foulds, by *Plassy* leaving Bombay March 6th, 1907; and Captain A. J. Williamson, to disembark at Aden on his return from privilege leave from England Oct. 11th, 1906.

The following officers at present serving at Aden are directed to return to the Western Command to complete their tour of Indian service: Major R. C. Thacker and Lieutenant F. J. Turner. The undermentioned officers at present on sick leave from Aden in England will not rejoin the former station: Captain T. Biggam and Captain L. L. G. Thorpe.

Burma Reliefs: The following reliefs will take effect before Dec. 31st, 1906:—Major A. J. Luther (Eastern Command) to relieve Major D. Steill (Burma Division); Major G. A. T. Bray (Eastern Command) to relieve Major M. Boyle (Burma Division). On relief both Major Steill and Major Boyle will be posted to the Eastern Command.

The undermentioned officers will be relieved from duty in Burma before March 31st, 1907, and the names of their successors hereafter notified:—Major C. H. Hale, D.S.O., Captain R. C. Wilmot, Captain G. H. J. Brown, and Captain D. G. Carmichael.

Extensions of service.—The following Royal Army Medical Corps officers are permitted to extend their present tour of service in Burma by one year, the date of termination of Burma tour being noted against their names respectively:—Lieutenant-Colonel W. W. Pike, D.S.O. (Dec. 31st, 1907), Major H. W. K. Read (Feb. 21st, 1908), Captain A. J. W. Wells (March 14th, 1908), Captain C. V. Bagshaw (Dec. 29th, 1907), Captain W. W. Browne (March 14th, 1908), and Captain N. E. J. Harding (Dec. 29th, 1907).

KING EDWARD VII.'S HOSPITAL.

The Prince of Wales has appointed, and the King has approved of, the following additions to the honorary medical staff of King Edward VII.'s Hospital for Officers: Dr. John Anderson, C.I.E., Mr. Charles A. Ballance, M.V.O., Mr. Malcolm Morris, Mr. T. H. Openshaw, C.M.G., Mr. Charters J. Symonds, Dr. Herbert Tilley, and Mr. Cuthbert S. Wallace.

INDIAN MEDICAL SERVICE EXAMINATIONS.

An examination for not less than 18 commissions in the

Indian Medical Service will be held in London on Tuesday, Jan. 29th, 1907, and the four following days. Further particulars and the necessary forms for application can be obtained from the Military Secretary, India Office, London, S.W.

Correspondence.

"Audi alteram partem."

A STUDY OF THE STREPTOCOCCI PATHOGENIC IN MAN.

To the Editors of THE LANCET.

SIRS,—Dr. F. W. Andrewes and Dr. T. J. Horder in an elaborate paper, published in THE LANCET of Sept. 15th, (p. 708), 22nd (p. 775), and 29th (p. 852), have entered upon one of the most difficult problems in bacteriology, a study of the streptococci pathogenic to man. The nature and complexity of their investigations are such that it is impossible for us to deal with the details and we cannot but admire the labour involved. Mindful, however, of your motto, "Audi alteram partem," and realising that they are dealing with diseases of very great importance, to some of which we have devoted much time and energy, we should feel greatly obliged if you would permit us to challenge some of their statements.

In the first place, with regard to malignant endocarditis. Their investigations, they remark, tend to show that malignant endocarditis has nothing to do with active rheumatism. Among their reasons they write: "In the majority of cases there has been a complete interval, generally of some years' duration, between the rheumatic phase and the phase of streptococcal infection." We should like to state that our investigations, published in the Transactions of the Royal Medical and Chirurgical Society, 1902, point to a class of case clinically, pathologically, histologically, and experimentally rheumatic. Our reasons were fully stated in that paper and our subsequent experience confirms our belief. Such cases may begin precisely like an ordinary rheumatic attack of severity or may follow directly upon such an attack, or as one would expect follow a year or more after a simple rheumatic attack. This last occurs in the majority of cases, because it is not the rule for an adult to suffer from severe rheumatic attacks of any nature at a much shorter interval than this, and it is adults who generally develop the malignant form. Further, such cases as these may show many of the evidences of malignancy and then eventually quiet down, a result nowadays often attributed to the use of some serum or even a vaccine, and yet one which may, as all physicians will admit, occur without such assistance.

Dr. Andrewes and Dr. Horder find that the salivary and faecal types of streptococci are an important cause of malignant endocarditis, and they have further classified a diplococcus rheumaticus obtained indirectly from one of us as the streptococcus salivarius 2^e, "a very common faecal type." Now, whatever they may term it, this is certain, that the micro-organism can produce both simple and malignant endocarditis as we have openly demonstrated on many occasions. It is also certain that it was obtained from rheumatic lesions and that the most frequent cause of simple endocarditis is rheumatism. If, then, this is a salivary micrococcus of a common faecal type and the commonest causes of malignant endocarditis are on their own findings the salivary and faecal types, why deny the association of rheumatism and malignant endocarditis?

No time-limit between an attack of rheumatism and the development of malignant endocarditis can disprove the probability of the malignancy being rheumatic, for there is every likelihood that the diplococcus once in the tissues may remain dormant but capable of evil for years. Their classification of the streptococci appears to us at present complicated and unsatisfactory, and we very much doubt that they are in a position as yet to deduce any opinion from their results as to the nature of rheumatism. Possibly these tests if used to expand Koch's postulates will have a sphere of usefulness. The name streptococcus salivarius 2^e is cumbersome and, in our opinion, not helpful. The term "diplococcus rheumaticus" is infinitely preferable, for it is founded upon Koch's postulates. Even in the last six years a good deal of light has been thrown upon experimental carditis, the relation of simple to malignant endocarditis, chorea, rheumatic, osteo- and rheumatoid arthritis.

The view that acute rheumatism is the result of an infection has been greatly strengthened and rheumatic processes have since the advent of the diplococcus rheumaticus been explained in a much more satisfactory way than ever before. The name streptococcus salivarius 2^e might, on the other hand, possibly lead someone to think that the solution of the problem of rheumatism lay in the fermenting of a few carbohydrates in a laboratory.

The latest phase of the rheumatic problem among bacteriologists is to look upon the diplococcus as a terminal infection. Dr. Andrewes and Dr. Horder have advanced this idea again in their paper. That explanation is inadequate and was disproved in our first contribution.¹ In Case 6, for example, that of a young man suffering from a second attack of rheumatic fever, with pericarditis and endocarditis, the diplococcus was isolated from the blood during life. This patient recovered and some five weeks ago Dr. W. H. Wilcox, who was a house physician when this patient was admitted under Dr. D. B. Lees to St. Mary's Hospital, told us he had received a letter from the patient saying that he had never been out of work since. As this was more than six years after the illness we must, we think, alter our conception of terminal infections if we accept this as an example of its occurrence. Then, again, we have isolated it from the knee-joint of a patient who never looked like dying and made a good recovery, and from the blood of a young woman who succumbed weeks later from sudden heart failure, having recovered from acute pericarditis, the occasion of our cultures. A careful study of the tissues in experimental rheumatism also makes this view untenable.

In such cases as these the authors would perhaps fall back upon their alternative—that we had isolated a chance micro-organism of malignant endocarditis. Certainly we had, in that it was the diplococcus rheumaticus which may produce that condition, but none of these cases showed any conclusive evidence of malignant endocarditis and in the fatal case we can positively affirm that there was the usual simple rheumatic form, for we made the post-mortem examination ourselves. It is melancholy to come back again to another suggestion by the authors to the effect that acute rheumatism is not primarily streptococcal, but that certain of its manifestations—e.g., endocarditis—are. This is an old story and any merit there may be in our work consists in the laborious studies that we have been making for ten years in order to show—as we venture to think we have succeeded in showing—that all the cardinal lesions of rheumatism are identical if due allowance is made for the anatomy of the different organs. The diplococcus can be found in all. All can be reproduced. Take them away from rheumatism, what have we left? Take away the cardinal lesions from tuberculosis, what have we left? Not the disease, but the generally admitted constitutional tendencies that exist in both cases. We are disappointed at their failures with rheumatic pericarditis, but console ourselves that others have succeeded, notably Wassermann, Triboulet, Ainley Walker and Beatson, Beattie, and others on the continent.

One more statement we wish to dispute. Of the problem of rheumatic fever they write: "The problem is fully as complex as is that of scarlet fever and is apparently as far from final solution." On the contrary, we think the problem of rheumatism is less complex than that of scarlet fever and apparently nearer final solution, and for these reasons: 1. Scarlet fever is very contagious, rheumatism is not, and as we know nothing of experimental streptococcal contagion we have that additional difficulty to cope with in scarlet fever. 2. Rheumatism is strongly hereditary; scarlet fever is, we fancy, not. There is, then, good reason for believing that in rheumatism there is some tissue peculiarity which offers another path for investigation. In scarlet fever there appears no hope in that direction. 3. In rheumatism one micro-organism certainly can be isolated from all the cardinal lesions of the disease and is capable of reproducing them. Whereas, unless Chance of Chicago has succeeded, no one has reproduced the cardinal feature of scarlet fever—its contagiousness.

In conclusion, we would point out that those who attempt to establish a scientific fact take upon themselves a heavy burden, and such work is easily tarnished. For this reason we regret that a bacteriologist of the position and eminence of Dr. Andrewes should have permitted the sentence, "Another specimen from a case of chorea kindly sent us by

Dr. Paine was unfortunately dead and could not be tested." We can affirm that this culture was living when it left our hands; of its later career we have no knowledge; but seeing that it was found dead it would have been easy either to have asked us for another or to have omitted any observation, or even to have substituted the more accurate "had died" for "was dead."

We are, Sirs, yours faithfully,

F. J. POYNTON,

ALEXANDER PAINE.

Nov. 19th, 1906.

HOSPITAL DENTISTRY FOR CHILDREN.

To the Editors of THE LANCET.

SIRS,—The importance of good dentistry for children is recognised by all well-to-do parents. The children of the poor, whether their parents take enlightened views or no, are usually condemned by circumstances to all the drawbacks attending neglect of the teeth. May I state a few facts in your columns about an effort at the North-Eastern Hospital for Children to meet this situation?

Situated in the centre of one of the poorest and most densely populated quarters of London, surrounded by a wilderness of slums, where dirt, squalor, and starvation reign supreme, the North-Eastern Hospital for Children carries on a good work, the value of which it would be impossible to over-estimate. In 1905 the in-patients totalled 1609 and the out-patients 27,333, the total attendances being 75,637. These figures will give some idea of the task which the hospital has to cope with. The in-patient accommodation consists of 125 beds and rarely do they lack occupants. In 1897 the staff, recognising the tremendous amount of dental disease among the patients and the necessity of special provision for dealing with it adequately, resolved to enlarge the scope of the hospital by creating a separate dental department, and in order that the best results might be obtained appointed a salaried dental officer and equipped the department with all the instruments and appliances needed for the conservation as well as the extraction of teeth. This step, at the time, was quite a pioneer one as regards children's hospitals, and at the present date is still unequalled in its completeness. Since the department has been established plenty of patients have been found to keep the dental surgeon busy, his aid being frequently called for in cases of anæmia, malnutrition, gastro-intestinal disorders, or any others in which bad teeth might play a more or less important rôle, locally or remotely, the result being in many cases to hasten considerably the date of recovery. Cases where the removal of adenoid growth and enlarged tonsils is indicated are, prior to operation, referred to him to have the mouth put into as healthy and efficient a state as possible, by the removal of hopelessly carious and diseased teeth and the stopping of others. It is hardly necessary to multiply instances to show the value of a properly equipped dental department to a children's hospital; many other cases might be cited where the best results in treatment can only be obtained by the coöperation of the dental surgeon.

It has become common knowledge in the district that special provision is made at the hospital for treating children's teeth and many cases come solely for dental aid, the determining factor in most of them naturally being toothache. As may well be imagined, among patients living in such terribly unwholesome surroundings the teeth are frequently in a most deplorable state of neglected caries, the mouth being septic and evil smelling in the extreme. This, of course, necessitates a large number of extractions, principally of the temporary teeth, as the age of patients is limited to 12 years. In most cases, practically in all where the operation might reasonably be expected to cause pain, an anæsthetic is given. This besides being humane is also good policy, where subsequent treatment in the shape of stoppings has to be done, as it is then essential to gain the child's confidence at the first visit by not inflicting pain. As a dental anæsthetic for children ethyl chloride is unrivalled, and for the past two and a half years has been exclusively employed in the dental department. This period embraces about 1800 administrations for dental purposes only, no fatalities having occurred and very few cases giving rise to any anxiety. As there was no selection or previous preparation of cases, the patients always being treated at the first visit, this speaks volumes for the safety of the anæsthetic. The clothing is always loosened prior to administration. In most cases the period of anæsthesia is long

¹ THE LANCET, Sept. 22nd, 1900, p. 861.