vious weeks, further declined to 96 last week; they included 28 from diarrhoea, 23 from scarlet fever, 18 from whooping-cough, 16 from diphtheria, 8 from "fever," 3 from measles, and not one from small-pox. The deaths from these principal zymotic diseases averaged 4.1 per 1000 in the eight towns, and exceeded by 0.7 the rate from the same diseases in the large English towns. The 28 deaths attributed to diarrhoea exceeded the number in the previous week by 2, and were 3 above the number in the corresponding week of last year. The 23 fatal cases of scarlet fever, exceeded the number returned in any recent week, and included 8 in Glasgow, 8 in Edinburgh, and 8 in Paisley. The 18 deaths from whooping-cough were within 1 of the number in the previous week; 13 were recorded in Glasgow, 3 in Greenock, and 2 in Dundee. The 16 deaths referred to diphtheria included 8 in Glasgow and 4 in Edinburgh. Eight of the 5 deaths from "fever" were returned in Glasgow. The deaths referred to acute diseases of the lungs in the eight towns, which had been 102 and 100 in the two preceding weeks, rose to 108 last week, and exceeded by 5 the number in the corresponding week of last year.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 19.9 and 24.4 per 1000 in the two preceding weeks, declined again to 22.5 in the week ending the 21st inst. During the first three weeks of the current quarter the death-rate in the city averaged 22.3, against 19.8 in London and 17.3 in Edinburgh. The 150 deaths in Dublin last week showed a decline of 13 from the number in the previous week, and included 4 which were referred to diarrhoea, 2 to scarlet fever, and 2 to whooping-cough. Thus the deaths from these principal zymotic diseases, which had declined steadily from 28 to 12 in the five preceding weeks, further fell last week to 8; they were equal to an annual rate of but 1.2 per 1000, the rate from the same diseases last week being equal to 3.4 in London and 3.6 in Edinburgh. The 4 fatal cases of diarrhoea showed a further decline from the numbers returned in the seven preceding weeks. The 2 deaths from whooping-cough corresponded with the number in the previous week, while those of scarlet fever exceeded recent weekly numbers. Only once previously, since the beginning of the year, has a weekly return for Dublin shown no fatal case of "fever." The deaths of infants showed a decline, whereas those of elderly persons exceeded the numbers returned in recent weeks.

THE POPULATION OF QUEENSLAND.

An official synopsis of the census enumerations of the population of Queensland during the twenty-one years, 1861-81, has recently been issued, and contains some interesting statistics of the rapid growth of that colony. Six census enumerations were held during the above-mentioned period, and the population increased from 30,059 in 1861 to 213,525 in 1881. Thus the population at the last census was seven times that enumerated twenty years before. As might be expected, the rate of increase is declining, for whereas the population doubled itself in the three years between the enumerations in 1861 and 1864, the increase did not exceed 23 per cent. in the five years between the two last enumerations in 1876 and 1881. A marked feature of the population of all new colonies is the excess of males over females, and the Queensland figures show similar results; it is, however, satisfactory to find that the inequality between the numbers of the sexes is decreasing. At the five enumerations in 1861-76 the number of females to 100 males ranged between 64 and 67. During the five years 1876-81, however, the increase of 40,242 in the population was almost equally divided between the two sexes, consisting as it did of 20,316 males, and 19,926 females. In 1881, therefore, the proportion of females to 100 males had increased to 70. The age distribution of the Queensland population is fully as abnormal as that of the sex proportion. It is not surprising to find that the population contains a largely excessive proportion of young adults and of children, whereas the proportion of elderly persons is exceptionally small. The mean age of the population must also be exceptionally low, and those who still believe in the value of the mean age at death as a test of sanitary condition, would certainly find the mean age at death in Queensland very low, and would be inclined to infer that this fact afforded unfavourable evidence of the health of the population. We need scarcely point out how fallacious

such an inference would be. It appears from the synopsis before us that at the last three enumerations a sickness return has been made. The heading of the columns containing the result of this inquiry is "Sickness and Accidents." The figures tell us that 647 persons were at the time of the last census suffering from sickness in private houses, and 360 in hospitals. It is difficult, without precise knowledge of the instructions given to the enumerators as to the definition of sickness and accident, to estimate the value of these sickness returns. Roughly, however, they appear to show that less than five per 1000 of the Queensland population were at the last census suffering from illness or accident. If these figures are not deceptive, they speak well for the sanitary condition of Queensland.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General John Edward Moffatt has been granted retired pay, with the honorary rank of Surgeon-General. Brigade-Surgeon J. Ferguson, to be Deputy Surgeon-General, vice J. E. Moffatt, granted retired pay. Surgeon-Majors Decimus Filius de Hodgson, M.D.; David Mackie, M.D.; Charles Mackinnon; and Campbell Millis Douglas, M.D., V.C., have been granted retired pay, with the honorary rank of Brigade-Surgeon.

Surgeon-Major John Henry Beath, M.D., to be Brigade-Surgeon, vice J. Ferguson, promoted.

Surgeon-Major Henry Hummerston Burford, from half-pay, to be Surgeon-Major, vice A. G. Bartley, retired on temporary half-pay.

Brigade-Surgeon Bruce, officiating Deputy Surgeon-General, Presidency Division, Bombay, is confirmed in that grade and appointment, vice Moore, whose tenure of office has expired.

Surgeon-Major Cameron MacDowall, 3rd Bombay Light Cavalry, is promoted Brigade-Surgeon, vice Bruce, promoted.

BENGAL MEDICAL ESTABLISHMENT.—Brigade-Surgeon Alfred James Dale, to be Deputy Surgeon-General.

MADRAS MEDICAL ESTABLISHMENT.—Surgeon-Majors Henry Crocker, M.D.; Hunter Adam; and Donald Coleman McAllum, to be Brigade Surgeons.

RIFLE VOLUNTEERS.—3rd Monmouthshire: Thomas Gilbert Prosser, Gent., to be Acting Surgeon.

ADMIRALTY.—Deputy Inspector-General John Traill Urquhart Bremner, M.D., has been promoted to the rank of Inspector-General of Hospitals and Fleets, with seniority of October 21st, 1882. Fleet-Surgeons George Robertson, M.D., and George Bewsher Beale, M.D., have been placed on the Retired List of their rank.

The following appointments have been made:—Fleet Surgeon Walter F. C. Bartlett, to Pembroke-yard, vice Wilson; Fleet Surgeon James N. J. O'Malley, to the *Agincourt*, vice Bartlett.

Correspondence.

"Audi alteram partem."

"THE TREATMENT OF PAUPER LUNATICS."

To the Editor of THE LANCET.

SIR,—The letter of Sir Henry Gordon, in your last week's issue, touches a point of the greatest importance to the insane poor and to the ratepayers of the county of Middlesex.

My experience, as one of the medical superintendents of Hanwell Asylum for ten years, warrants me in the expression of the opinion I have formed, that the great want for the satisfactory treatment of the insane poor in this county is a hospital constructed and organised on the most liberal principles. Such a hospital, acting as a central receiving house, would greatly tend to check the enormous accumulation of the insane, as well by increase of cures as by preventing the sending of unfit cases to the various distant asylums, and would thus be a source of great economy. Additional economy would also result by saving the large outlay necessitated by transferring patients from one institution to another in the present hap-hazard system of distributing them. Numerous other reasons might be advanced

why a more liberal provision for medical treatment should be made, but I will content myself with one illustration.

In Scotland there are, roughly speaking, 6000 insane paupers in asylums; in Middlesex there are 5700 in the three asylums of Colney Hatch, Hanwell, and Banstead; the latter have fourteen medical attendants; the former, treated in six parochial and eighteen district asylums, have, on the most moderate computation, twenty-four. The comparison might be carried into every detail of asylum accommodation, and in regard to the relative amounts of land provided for asylum use, the inequality would be found still more striking; the one point of medical attendants is sufficient to enforce my argument. What is true of Middlesex is true to a greater or less extent of the whole of England, that, while the buildings for the detention of the insane have been provided on a liberal scale, the means for treatment, as gauged by the numbers of medical officers, have been niggardly supplied; so that in this respect England compares most unfavourably with France, Germany, America, Russia, in fact with almost every civilised country. This result has been brought about by the building funds being derived from a practically uncontrolled source; the current expenditure, on the other hand, being sharply checked by the parish authorities.

I fervently hope that, in supplying the additional accommodation now required, Middlesex will, by providing a liberally organised hospital, set an example that will tend more than anything else to check the increase in this country of lunatics needing asylum detention.

I am, Sir, your obedient servant,

Hanwell, October, 1882.

H. RAYNER.

STRYCHNIA POISONING DELAYED EIGHT HOURS BY OPIUM.

To the Editor of THE LANCET.

SIR,—I think the following case may prove of interest to some of your readers from the long interval between the taking of the strychnia and the onset of the symptoms.

On June 24th last, at 1.50 P.M., I was called to a case of poisoning at the police station, and found in the guard-room a stout, healthy-looking, well-developed young woman of twenty-three, six months advanced in pregnancy, suffering from well-marked symptoms of opium poisoning. She was unable to stand without assistance; could with difficulty be made to answer questions; and her face was becoming pale and ghastly. A quarter of an hour previously she had been discovered in a semi-conscious state near the river, and in her pockets were found a two-ounce bottle containing a few drops of tincture of opium, a packet of Battle's vermin killer torn in two, and with five grains of the powder remaining, and a pill-box which afterwards proved to contain ordinary aperient pills; also a letter to her mother and father stating she intended to commit suicide. I could only elicit from her that she had poisoned herself, but I could obtain no further particulars. I gave a large dose of sulphate of zinc, which produced vomiting in a few minutes, the vomit being composed principally of fruit, and only smelling slightly of opium. After that she had draughts of hot water, coffee, and mustard and water, till her stomach was completely washed out. I left her much better at 2.45 P.M., with directions that she was to be kept walking up and down, and that I should be sent for immediately if any change occurred. I returned at five o'clock, and found her still improving, without the slightest symptoms of strychnia poisoning; so that I began to think it almost impossible she could have taken the vermin killer. In fact, the only difference the case presented from an ordinary one of opium poisoning was that the pupils were little, if at all, contracted; at any rate, not nearly so in proportion to the severity of the other symptoms. I returned about 7 P.M., and found that slight clonic convulsive movements of the hands, and in a less degree of the legs, had set in, and was informed they had commenced a little after 6 P.M. As she was very drowsy, and dropping off between the spasms, and as I thought it possible they might be in great part hysterical, I hesitated about giving chloral; but finding after an hour the convulsions increasing, both in extent and degree, I gave forty grains of hydrate of chloral, and had her removed to the union infirmary. An hour afterwards (9 P.M.) I saw the patient in company with Dr. Paterson. The spasms were now well

marked, extending over her arms, hands, and shoulders, and in a less degree over her legs and feet. There was slight opisthotonos and considerable pain at the pit of the stomach, but no trismus, and but little twitching of the muscles of the face. The pulse and temperature were only slightly above normal. The opium symptoms had almost entirely disappeared. She was ordered two drachms of chloral, but a drachm to be taken every hour. For a couple of hours the symptoms increased in violence, but after that they gradually subsided, and by 4 A.M. (Tuesday) had almost disappeared. Next morning she only complained of general soreness and of feeling very hungry.

On instituting inquiries we discovered that early on Monday morning she had purchased at one shop a packet of vermin killer, and at another an ounce of laudanum, a box of pills, and a drachm of white precipitate. The latter, I may here remark, was never traced. She said herself she had taken the powder a little after 10 A.M., and immediately after two ounces of laudanum. A packet of Battle's contains two grains of strychnia, so that she must have taken almost a grain and a half, and as I did not see her till nearly four hours after, the emetics could hardly have removed it. Though the poisonous dose of strychnia, as in the case of most other drugs, varies greatly from half a grain, which quantity killed Dr. Wain in fourteen minutes, still, I think the above might under ordinary circumstances be considered a fatal dose, particularly when a person is unused to the drug. Taylor mentions four hours as the longest interval before the appearance of the symptoms, while here we have nearly a grain and half producing not the slightest effect for eight hours, during which time the patient had every symptom of opium poisoning with the exception of contracted pupils. Strychnia is said, in poisonous doses, to produce dilatation of the pupils, so that it would seem as if the strychnia must have neutralised the effect of the opium on the pupils; the opium, on the other hand, neutralising, at least for a time, the effect of the strychnia on the cord. I think this might have a practical bearing in strychnia poisoning when chloral or the other usual antidotes, Calabar bean, &c., were not at hand, for though opium is mentioned in books as an antidote, still I think it is seldom or never used.—I am, Sir, yours, &c.,

ROBERT D. W. MECREDY, M.B., C.M.

Grantham, Lincolnshire, Sept. 1882.

SUDDEN DEATH AFTER DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—The following details and observations may help to explain the subject of "Sudden Death following Diphtheria," to which attention has lately been drawn in your journal.

Hitherto it has been considered by many that the action of the diphtheritic virus upon the nerve-centres was sufficient to account for sudden lethal terminations (when not obviously due to other causes), but recent observations may tend to modify that assumption.

During the Practical Pathology class at the Middlesex Hospital, in Nov. 1881, attention was particularly drawn to certain changes present in the heart of a case of diphtheria. The muscular tissue was somewhat pale and flabby, and presented microscopically the following conditions:—Muscle fibres cloudy and undergoing fatty changes; neighbourhood of bloodvessels, interstitial connective tissue and spaces, were infiltrated by an abundant proliferation of nucleated and granular cells about $\frac{1}{300}$ in. in diameter. Scattered here and there were also seen a few granular, yellow bodies, in size about three times that of nucleated cells, but possessing no distinct nuclei. This condition was not peculiar to any particular portion of the heart's wall, but occurred in several large unequally distributed areas. Both fatty and interstitial changes were seen together.

The following case is also in point:—

Sarah B—, aged fifteen, a domestic servant, was admitted into the Middlesex Hospital, under Dr. Coupland's care, on March 14th, 1882, with marked symptoms of diphtheria—pain on swallowing, dyspnoea, swollen parotid, submaxillary, and cervical glands, and abundant false membrane on tonsils and pharynx; tongue coated thickly; heart and lungs normal. Temperature 98.4°; pulse 64. She was ordered steam inhalations, and a draught containing perchloride of iron. The pharynx was painted with a saturated solution of bicarbonate