theria, or whooping-cough. These 8 deaths from the principal zymotic diseases showed a decline of 7 from the number in the preceding week, and were equal to an annual rate of 1·2 per 1000, the rates from the same diseases being 4·5 in London and 1·2 in Edinburgh. The 4 deaths referred to diarrhoeal diseases showed a further increase upon recent weekly numbers. The 2 fatal cases of fever corresponded with the number in the previous week. The deaths from scarlet fever, which had risen from 1 to 7 in the previous three weeks, declined again to 1 last week. Seven inquest cases and 5 deaths from violence were registered; and 49, or more than one-third of the deaths, were recorded in public institutions. The deaths both of infants and of elderly persons considerably exceeded those recorded in the preceding week. The causes of 19, or more than 13 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

SMALL-POX AT WINDSOR.

To the Editor of THE LANCET.

SIR,—I must protest against the publication of such injurious misstatements as are contained in the report of your Windsor correspondent. It is quite untrue that small-pox has prevailed in the slums previously denounced by him. The quarters which he particularly condemned were Bier-lane and its courts, South-place, and Sydney-place, and in these districts altogether only one case has occurred. There was another in Love-lane, which street, however, he barely mentioned. From neither of these two patients did any spread of infection take place. Charles-street is not in any sense a continuation of South-place, for it is at right angles to it, and of different construction and circumstances. The sensational story of a man dying of small-pox at 4, Charles-place, on a heap of shavings in a back room without ventilation, and lying too long unburied, is a fiction altogether, for the case which no doubt suggested it was that of a man who died of apoplexy. He occupied a front room, which was quite well ventilated, and he was buried on the third day after death. After such a flagrant instance of your reporter's inaccuracy it is scarcely worth while to answer him further. The errand-boy at 31, South-place, who excited his pity as having lost his place through the unjust conduct of the sanitary authority, was himself the sufferer from small-pox. We have now a hospital camp for the isolation of patients, but before it was ready it was of course necessary to prevent persons from going in and out of infected cottages; but compensation was (your Commissioner will be surprised to hear) given to those who were thus thrown out of work. The precautions taken were in almost every instance perfectly successful in preventing the spread of infection, and had it not unfortunately happened that the existence of one or two cases was for a time concealed, the outbreak would probably have been early stamped out. As it is, it has been of slight severity; only one death has occurred within the urban district, and the epidemic, if so it must be called, appears to be at an end. In one thing I quite agree with your Commissioner. It is true that his former report was fruitless of good result, but, on the contrary, it did much harm, and the ill-feeling which it excited is the greatest obstacle to the success of any scheme for the improvement of Windsor.

I am, Sir, yours obediently,

EDWARD CASEY, M.D. Lond.,

Windsor, Aug. 17th, 1886.

Medical Officer of Health.

* * In reply to the above letter, it is barely worth while discussing whether Charles-street is a continuation of South-place. The fact that the last house of the one thoroughfare almost touches the first house of the other thoroughfare is, we should imagine, sufficient; but, if necessary, we could publish a plan of the neighbourhood. Our Sanitary Commissioner is pleased to frankly recognise that he was incorrectly informed, and committed an error in stating that the man who remained some time unburied died of small-pox. Small-pox did occur at No. 4, Charles-

place, but the man who died of small-pox lived at the corner of Charles-place and South-street, and the man who remained some time unburied died at No. 1, Charles-place. At the time of this last death there were nine cases of small-pox within a few yards of the unburied body, and close to a public-house and a hairdresser's shop. It is easy to question details and to show that some little confusion arose, that some particular case of small-pox occurred four yards to the right instead of four yards to the left of a given point. People inhabiting such districts reply to questions in an excited and somewhat incoherent manner; but the fact remains that Windsor possesses disgraceful slums, that small-pox has broken out in those slums and still continues, if not precisely in the district under Dr. Casey's care, yet quite close enough to the borough to be a menace to visitors and residents. The other great fact, that the Windsor authorities did not possess a proper fever hospital, is also demonstrated by the epidemic. We are extremely gratified to learn that compensation has been given to those on whom quarantine was imposed, which is much to the honour of the Windsor authorities. We cannot believe that our report on Windsor has excited any ill-will among those who are actuated solely by the desire to ensure the public good. There may be, of course, a few persons whose only thought is the fear of expense, but with these we are not in the least concerned.—ED.L.

HYDROPHOBIA AND ITS CURE.

To the Editor of THE LANCET.

SIR,—Last month a patient was admitted into hospital, having been bitten about half an hour previously by what he declared was a rattle-snake. On the web between the fore and middle finger of the right hand I found the characteristic punctures produced by the snake's fangs, and the back of the hand was much swollen and semi-fluctuant. The man was retching violently, with rapid, small pulse. I immediately made a free incision into the most prominent part of the swelling, and about half an ounce of black fluid blood spurted out. Hot applications were used and bleeding freely encouraged. The vomiting at once stopped, and in three days he was dismissed well. Immediately after this THE LANCET of April 24th came to hand with Surgeon-Major Pringle's paper on the Treatment of Hydrophobia by incising the part and encouraging bleeding by suction, the very same treatment as I had adopted in my case of snake-bite. This seems to me a most rational method of treatment of recent bites, whether from the rabid dog or the venomous reptile. The poison, I presume, in the great majority of cases takes some considerable time for its absorption into the general circulation. Such being the case, by freely extracting blood locally, which will be in a state of congestion, if not stasis, in the capillaries, it seems reasonable to presume that a large portion, if not all, of the poison will be thus eliminated. But, supposing the case is not seen at once, but after the lapse, say, of eight or ten hours, I think it would still be advisable to incise freely the bitten part, in the hope that there still remained in the region of the bite a greater or less quantity of unabsorbed venom. With local incision would it be unreasonable to adopt general bleeding, say, from the arm? By this means the actual amount of poison in the system would be lessened, and proportionately the chances of escape increased. Of course, the objection will at once arise, that if the poison be in the form of a living germ, until the last germ is removed the danger will still be latent. But surely the fewer germs we have to attack the more hope there will be for the third stage in the treatment—viz., the subcutaneous injection of the permanganate of potassium.

I claim no originality for suggesting the use of this remedy. It has been much vaunted in the case of snake-bites, and is extensively used by the large *fazendeiros* in this country. But a few weeks ago I observed in a native non-medical newspaper—the *Jornal do Commercio*, published in Rio—a statement by a medical man that he had received a

letter from a *fazendeiro* who had had two slaves bitten by a dog, which was afterwards proved to have been hydrophobic. The man (for what reason I know not) injected the permanganate solution at once in the region of the bite, and neither of the slaves, after a long interval of time, had shown any symptoms of the dreaded malady. The doctor was appealing in the newspaper for some hydrophobic dogs in order that he might experiment with the permanganate.

Now, whether the happy result in the case of the two slaves mentioned was *post hoc* or *propter hoc* is a point which can only be determined, like M. Pasteur's treatment, by experience. Like the rest of the world, I am waiting with anxiety the result of this eminent man's treatment. But if ultimately successful, is there any hope of simplifying the methods of procuring the vaccine and also the process of application? If not, I fear after a little time country practitioners and poor people will be little better off than they are now, as a trip to Paris is beyond the means of most people. The method of treatment I have suggested has this advantage, it is within the reach of all, and certainly it appears more reasonable than merely passing a piece of nitrate of silver over as much of the lacerated flesh as can be conveniently got at.

To summarise: 1. If the bite is seen at once, stop as far as possible circulation through the part, as is recommended in the text-books; freely incise the part and encourage bleeding, as recommended by Surgeon-Major Pringle; treat the wounds on antiseptic principles, rendering them as far as possible aseptic; inject the permanganate of potassium subcutaneously. 2. If some hours have elapsed, in addition to the above treatment I would suggest general bleeding to a moderate degree, repeated at intervals and followed closely by the free administration of the permanganate.

I am, Sir, yours obediently,

W. LONDON STRAIN, M.B. Glas.,

Late Res. Asst. Glas. West. Infirmary.

Morro Vello Hospital, Brazil, June 18th, 1886.

To the Editor of THE LANCET.

SIR,—The imitative faculty—the link Simian—is strong in man. As soon as Virchow promulgated a doctrine of cells, cells were found everywhere. Now that the cellular pathology has for a time been superseded, microbes are found everywhere and in every disease. The microbic theory of hydrophobia is the natural outcome of imitation. We have recently had several announcements of the discovery of special microbes of hydrophobia, found in brain or cord. Strange to say, in the place or in the secretion where we would expect a microbe to be found, no result has been attained.

A rabid dog runs along the street and bites some one. He implants in the wound *something*, the saliva presumably being the medium. Now here we have the first stage in the problem. Has the dog simply exploded a nerve cell in the brain, and transmitted by nervous force a microbe from the brain, into the wound, or are the dog's teeth charged with microbic germs? A *reductio ad absurdum*! Rather, does not the bacteria lie in the saliva, just as in snake poisoning? And should we not look to this saliva and here carry out researches and ascertain—1. The exact nature of the saliva in the rabid dog, chemical and microscopical. 2. The exact changes in a wound caused by a rabid dog from the day the bite was first inflicted until the day of death, if such a result follows. 3. The infective nature of the wound must be also tested, &c. 4. When death takes place the total changes in all the tissues must be noted. The salivary glands, the brain, cord, &c., are all worth attention and control. Experiments should be made with all parts of the body. I could multiply the number of experiments required. It is manifestly unscientific to begin with the last part affected. The brain substance, the medulla, are implicated we know in the final stages, but as the rabid dog does not implant when he bites any part of his brain substance the initial lesion is what concerns us more particularly.

Against a microbic theory of hydrophobia many facts militate:—(1) The period of incubation; (2) the symptoms; (3) the local action in the wound; (4) the dosage; and (5) the general history of the disease. It does not affect this argument that a kind of pseudo-hydrophobia can be produced by injecting direct into the brain of a dog a cultivated fluid called rabic. Almost any kind of material, injected into

the medulla of the rabbit, will produce such symptoms, and the animals will die with symptoms like those of the rabbits killed in the Paris laboratory. Carried on consecutively from rabbit to rabbit in the same way a cultivating fluid can be made. If we inject into the skin of a man some of this fluid, we do perhaps as little harm as Pasteur has done to his patients, but this part of my thesis has not yet been done. In some of the recent researches on rabies, I find a lack of originality. The microbes have rather cobwebbed the field. Those who are experimenting will, I trust, shine out into a field of their own, and leave off imitating.

I am, Sir, yours very truly,

Halifax, August 2nd, 1886.

TH. M. DOLAN, M.D.

CASEY *v.* IMLACH.

To the Editor of THE LANCET.

SIR,—Your views concerning intra-peritoneal hæmatocele, however consistent they may be with the teachings of old and respected text-books, are wholly irreconcilable with the facts of modern abdominal surgery. I have now operated on twenty-five cases of intra-peritoneal hæmatocele, with one death; and I have seen about twenty-five post-mortem examinations of this condition. In every one of these cases the cause of the hæmatocele was a ruptured tubal pregnancy. Of all the cases that were left alone there was not a single recovery, and of all the cases operated on there was one death. You say that intra-peritoneal hæmatocele is a condition frequently met with, and that extra-uterine pregnancy is comparatively rare; but you must admit that my tabulated and published experience is absolutely the reverse, and I believe all experience, without operation or post-mortem examination, in this matter to be mere guesswork.

The symptoms given by the plaintiff in the witness-box, together with the description of the operation by those who saw it done, led me to believe that this hæmatocele was an old ruptured tubal pregnancy with recurrent hæmorrhage, and with this view I had to regard it as unique. I certainly have seen none like it.

I am greatly surprised to find in the classic columns of THE LANCET a continuation of that extraordinary confusion of terms between "spaying" an animal and "removal of the human uterine appendages." Animals are spayed before puberty to prevent its access, and the consequent development of a sexual appetite and powers, and the powers of procreation. The ultimate object of the process of spaying is an improvement in our food supply or in our domestic service by animals.

Removal of the human uterine appendages is performed after puberty—generally long after puberty. It has no influence, so far as I know, in destroying the sexual powers; indeed, it constantly restores them after disease has destroyed them. It does not usually destroy the procreative power, for that (in the great majority of instances) has been already destroyed by the disease for which the operation has to be performed. Finally, the operation has no other purpose than the saving of life and the relief of suffering. The operation of spaying an animal and the removal of the human uterine appendages have therefore no conceivable resemblance. Consequently, to talk of "spaying women" is to display great ignorance or to indulge in wilful misrepresentation for purposes of giving offence.

Concerning the frequency of the operation, that will always be relative, like everything else. The man who has a reputation for seeing patients safely through pneumonia will surely have a large number of cases of that disease; so the man who can cure the agonies of pyo-salpinx, or arrest the bleeding of a myoma with a low mortality, will surely get many cases sent to him for removal of the uterine appendages.

It will be left to those who cannot recognise the cases when they see them, and who can operate only with a murderous mortality, to talk nonsense about the "wholesale spaying of women." Whatever authorities have condemned it are found to be those like the minority of one at the recent meeting of the Obstetrical Section at Brighton, who confessed that he knew nothing of the subject, and was now too old to learn from those who did. At the Brighton meeting we had an authoritative and final discussion of the subject, and a verdict which will encourage the progress of abdominal surgery.

That the human uterine appendages have been removed