

105° F.; on the next day it had fallen to 100°, and then she rapidly convalesced. If Drs. Herman and Cullingworth's views had been acted on this would certainly not have been done, and in my belief a valuable life would have been lost. I assume, of course, that neither Dr. Herman nor Dr. Cullingworth has chanced to meet with a case of puerperal disease which they have traced to defective sanitation; but no amount of negative evidence of that kind can outweigh a single case of positive evidence to the contrary, such as I have recorded in the paper referred to. This sort of argument reminds one strongly of the kind of reasoning one hears so often with regard to antiseptic midwifery. Dr. Brown, Dr. Jones or Dr. Robinson has attended a thousand or two thousand cases of midwifery without losing a patient, therefore all this modern talk about the value of antiseptics is mere twaddle and nonsense. It sounds strange, however, when coming from two such unquestionably high authorities on obstetric matters. It will be observed that I have been careful to talk of defective sanitation as a cause of puerperal "disease." I am quite prepared to see it proved that such disease is distinct from "septicæmia." There are more things in puerperal disease than are dreamt of in our philosophy, and the whole subject is too much in its infancy to justify very dogmatic assertion with regard to it. For aught I know to the contrary it may yet be shown that the two types of disease are as distinct as "typhus" and "typhoid" fevers; all I can say is that hitherto I have not been able to distinguish them, and, therefore, in my book on "Midwifery" I have described them both under the heading of "puerperal septicæmia," and I have never been able to see why infective germs suspended in the atmosphere should not be as dangerous as analogous germs on the hands. Unquestionably puerperal disease from poisoning with sewer gas is neither so common nor important as poisoning from infective germs on unclean hands or instruments. It seems, however, a curious argument of Dr. Cullingworth that it is dangerous to recognise and guard against a source of disease of comparatively rare occurrence because "to preach such a doctrine was to divert attention from the point of real importance—which was personal cleanliness on the part of all around the patient." Certainly I am open to no such imputation, for I have insisted on the paramount necessity of personal cleanliness and rigid antisepticism in obstetric practice as strongly as any recent writer on midwifery.

In conclusion, I am tempted to relate a very important and tragic case that occurred in my own practice thirteen years ago, which has not hitherto been published, because it illustrates a remark made in the discussion by Dr. Handfield-Jones that "he considered that a woman who for days or weeks before delivery had lived in a tainted atmosphere might be so impregnated with poisonous particles that after delivery her tissues would become a favourable breeding ground for septic germs"—a theory which I have myself always maintained to be possible. I was engaged to attend a lady in her first confinement. A fortnight before the expected date of delivery her labour commenced in her country home, some distance from London. She immediately placed herself in the train and went to her town house in South Kensington. The labour was over before either I or the nurse reached her. The nurse arrived first and found the child born and the placenta lying in the bed, attached to the child. She put on the bandage, and when I came I found the uterus firmly contracted and I had nothing to do. I particularly beg attention to the fact that neither I nor the nurse had occasion to make a vaginal examination; from first to last none was made, so that the patient could not have been poisoned by infective materials conveyed on the hands. Three days afterwards puerperal disease of the most intense type developed—to avoid argument I shall not call it septicæmia. Within a week the patient was dead. One of the nurses unfortunately pricked her hand, acute septic mischief resulted, and in a few days her arm was amputated at the shoulder-joint in University College Hospital. Naturally a tragedy of this kind was most impressive, and the origin of the disease was altogether a mystery to me. Two years afterwards the husband called on me and said that he felt it to be his duty to inform me that, having had several cases of obscure illness in his country house, he had had the sanitary arrangements investigated, with the result that a large cesspool had been found under the ground-floor rooms which his wife had occupied, the emanations from which she must have been constantly exposed to for many weeks before her confinement. Dr. Handfield-Jones' theory would explain this lamentable case. I am

afraid it would be difficult to reconcile it with Dr. Herman's contention that the relation between the drainage and the illness was nothing more than coincidence.

I am, Sirs, yours truly,

W. S. PLAYFAIR.

George-street, Hanover-square, Nov. 18th, 1893.

To the Editors of THE LANCET.

SIRS,—The discussion on Dr. Braxton Hicks' paper at the Obstetrical Society on Nov. 1st turned upon the question of the influence of defective drainage upon the lying-in woman. The President, Dr. Herman, stated "that there is no evidence that the relation between defective drainage and puerperal fevers is anything more than one of coincidence," and Dr. Cullingworth, who supported him, added, and justifiably added from his point of view, that "it was a very dangerous doctrine to propagate that puerperal septicæmia could be caused by defective drains and sewer emanations, because it diverts attention from personal cleanliness." Believing, as I stated in the discussion, that the relation may be one of direct cause and effect, I have looked up several works on obstetrics, and find that some writers leave the question in doubt (Parvin, Kucher, and Leishman); Winkel is sceptical as to any such influence, but writers such as Playfair, Milne Murray, Galabin, Underhill, and Fehling believe that there may be a definite causal relation between defective drainage and puerperal septicæmia. The views of the various speakers at the discussion were equally divergent. Two things seem to me to be established: (1) that a lying-in woman may develop serious symptoms, with hyperpyrexia, if sewer emanations are present, though she may have previously lived under identical surroundings without apparently suffering; and (2) that these serious symptoms are often indistinguishable from certain forms of puerperal septicæmia, except from the fact that removal of the patient will—in early cases, at all events—prove that the cause was in the patient's atmospheric environment, the symptoms disappearing as rapidly as they do when the offending piece of decomposing placenta is removed in a case of puerperal sapræmia. That such cases, if not removed from this continuous atmospheric poison, do occasionally succumb seem almost inevitable. The fact that puerperal septicæmia is most frequent in winter, owing to deficient ventilation, is also a fair argument to show that defective drainage should not be disregarded by accoucheurs in their desire to be scientifically antiseptic and to remove other more obvious sources of danger.

I am, Sirs, yours faithfully,

Manchester-square, W., Nov. 20th, 1893.

AMAND ROUTH.

STATE REMUNERATION.

To the Editors of THE LANCET.

SIRS,—I am obliged by your giving publicity to my proposed scheme for the better remuneration of medical men, although but an abstract of my suggestions and the omission of important safeguards that would prevent many of the objections to which you direct attention, such as in Clause 8, where it is proposed that any persons rated above forty guineas who availed themselves of the State medical men should at the expiration of their illness be liable for a levy of one guinea per week for such medical attendance, if rated at forty guineas, and even two guineas if rated at £60, and in rich districts this addition to the "health tax," as I suggest calling it, should be further increased *pro rata*, and the moneys so recovered would go towards the salaries of the State medical practitioners of poorer districts. In Clause 9 I mention: "It would be desirable that these district appointments should vary in remuneration, social position, and work, that by giving opportunities of promotion they should stimulate ability and encourage science and industry." It has been said that the popular medical man would have too much to do; then, I reply, he should be promoted to a district with less to do and increased stipend—i.e., if his popularity were due to his skill and attention. I allow with you, Sirs, that the scheme "bristles with difficulties," but they are not insurmountable. The need for some reform in our remuneration is urgent, and that there is something tangible and practical in my proposal I am led to hope by the unexpected attention the scheme has received from all quarters. It has been quite a task to reply to the many letters I have received on the subject, and from men of influence, for it concerns the public as well as the

profession, for they are not sufficiently protected from the numerous evils of the cheap doctors, and this you have admitted. I thank you for the generally courteous tone of your objections to my proposition, but I must take exception when you allude to the scheme as being "almost demoralising." It would prove no more demoralising than free education, for it is not suggested for a moment that anyone would be compelled to employ the "State doctor," for it is only a privilege offered to those who required or desired his aid; on the contrary, I expect the wealthy—and many, too, who are not wealthy—would still prefer their own private medical attendant, just as it is the great exception for a man of position and income to take advantage for his children of the Board school.¹ The passing of Mr. Forster's Act gave a great stimulus to the education of this country, especially to our private schools. 2. Free medicine would, I believe, prove in its result quite contrary to your fear of making all men much alike in professional work and remuneration. Why! I even suggest that the salary of the general practitioner should vary from £300 to £1500 or £2000, and the State physicians from £1000 to £10,000 a year. Allow me to add the following example of the working of my scheme for a district of 100,000 inhabitants, who are neither poor nor rich, such as is Hammersmith, which I propose should be divided into thirty districts, twenty medical men to receive a salary of £500 per annum, ten with £300. This would cost £13,000. A sixpenny rate produces £13,645. Each district should have a population of 2000; this would provide for 60,000: 26,000 go to hospital; 3000 are attended by the Poor-law; 1000 who would pay their own medical man, but most probably a greater proportion, leaving all that would be obtained from those who were rated above forty guineas for the poorer neighbourhoods. The accomplishment of the scheme would thus fall but lightly on any, and would prove to be to the injury of none. I would therefore again ask you kindly to reserve your judgment (for which I, with other general practitioners, have considerable respect) until you have received my address *in extenso* (which is now in the course of publication), for it is sad and lamentable to think that for success or even existence the majority of well-educated young practitioners must for the early years of medical life depend upon and look to, not his college and alma mater, but the Self Aid Association, London and Manchester, and other similar commercial institutions who live, and were called into existence by the necessities of an overcrowded and ill-rewarded profession. Apologising for the length of my letter,

I am, Sirs, your obedient servant,

FREDERICK H. ALDERSON, M.D.

Glenthorne-road, W., Nov. 20th, 1893.

THE PRESERVATION OF PATHOLOGICAL SPECIMENS.

To the Editors of THE LANCET.

SIRS,—So little has been written as to the best way of keeping morbid anatomy specimens with the view of their temporary or permanent preservation that the following remarks may not be out of place. On this point very few, if any, directions are given in the text-books, and in some half-dozen or so of the manuals of pathology which I have consulted the subject is ignored altogether. I do not, of course, refer to microscopical sections, on the preparation of which so many excellent works exist, but to the large naked-eye specimens, such as hearts, kidneys, malignant tumours, and the like. As curator of the museum of St. Bartholomew's Hospital many valuable specimens are in the course of the year sent to me from various parts of the country, and the value as well as the appearance of those which may be selected for placing in the collection would be very much enhanced if a few simple directions were carried out when the specimens are quite fresh. What usually occurs is that the specimens when just removed by operation or at a post-mortem examination are at once put into weak spirit and water, or what is worse, into a weak solution of carbolic acid. The result is that the various parts of the specimen, muscles, fibrous tissue and bones, all quickly assume a dirty brown colour due to the diluted colouring matter of the blood, which is only partially soluble in either of the above solutions. As it

is almost impossible to get any of this colour out again the muscles lose the bright colour they had when fresh in exchange for this dirty brown, which they also impart to structures hitherto uncoloured. Unfortunately, no means are at present in use which will in any way—that is, at all satisfactorily—preserve the natural colour of the specimens. I am acquainted with Wickersheimer's solution, but specimens preserved by this means never look well. One is therefore obliged to fall back on spirit as the best preservative on the whole. Since it is impossible to retain the natural colour, the best thing to do is to get rid of it as soon as possible. The following will be found the best means of doing this. Thoroughly wash the specimens in cold water as soon as they are removed from the body and leave them to soak in water for twenty-four hours; in very hot weather twelve hours will be long enough. Livers and spleens, and organs which contain much blood will require to be left rather longer in the water, say for from thirty-six to forty-eight hours. In the case of the liver a stream of water sent through the portal vein by means of a syringe or tube attached to a tap will have the same effect as a prolonged soaking. The specimens should then be placed in a mixture of equal parts of ordinary methylated spirit (usually about 65 over proof) and water; the amount should be about equal to two volumes of the specimen or rather less; this is easily calculated approximately. If it is desired to preserve the specimen permanently it will be necessary to change the weak spirit at the end of a week, and again at the end of a month if it is much discoloured, and perhaps a third or fourth time; under any circumstances the spirit should be stirred every two or three days at first, in order to prevent the colouring matter of the blood from collecting at the bottom of the vessel and staining the lower part of the specimen. When it is ready for permanent mounting, as shown by the fact that the spirit no longer changes colour, it should be finally placed in spirit at proof as ascertained by the alcoholometer; for this purpose freshly distilled spirit diluted with distilled water should be used.

There are a few other points to be noted. Brains should be washed by running a little water over them and at once placed in strong spirit—i.e., ordinary methylated spirit without dilution. At the same time care must be taken, by means of cotton wool placed under and at the sides of the brain, to maintain its proper conformation, as otherwise it will become hardened in a distorted manner. Tumours which are soft when first removed, such as goitres, sarcomatous or tuberculous testes, &c., are much better preserved by being placed at once in strong spirit, after careful washing of the outside, before they are cut into; this will harden them sufficiently in a week or ten days to ensure that they retain their shape when cut and to allow a subsequent satisfactory microscopical examination of their structure to be made if this is needed. If this is required in the case of ordinary specimens treated by soaking and weak spirit a small piece should be cut off from the most typical part and placed in Müller's fluid or strong spirit when the specimen is quite fresh. If these simple directions are carried out many specimens which are, unfortunately, spoilt will be saved, and the appearance of all will be very much improved, and the ugly brown leathery lumps which are now handed round on plates at the Pathological and other Societies will be known no more. Specimens sent from the country should either be first washed and then wrapped in a cloth moistened with water, and covered with a piece of gutta-percha tissue and plenty of paper, and despatched at once; or they should be well soaked and placed in a weak spirit solution for about a week before they are sent away—in this case the cloth should be wrung out in weak spirit instead of water. Hoping, in the interests of our pathological museums, that you will be able to insert this letter, I remain, Sirs, yours faithfully,

Welbeck-street, W., Nov. 20th, 1893.

EDGAR WILLETT.

"SEA VOYAGES FOR THE SURGICAL CONVALESCENT."

To the Editors of THE LANCET.

SIRS,—I should like to make a few comments on Dr. Thomas Dutton's criticism of my article on the above subject.

The impeachment of the accuracy of the figures given in the tables is, I submit, scarcely fair. The observations were furnished by six commanders of five different steamers, on voyages extending over a period of about four years, and

¹ I read lately that a medical man was compelled on account of poverty to send one son to the Board school and another to the factory.