that it is necessary to scheme and to prepare beforehand all the dressings you will require. These dressings must insure support, and rest, and ease.

And here let me mention, if, in dressing a large surface, as after the separation of sloughs after a burn, or when a considerable portion of skin has been of necessity sacrificed in an operation, we find there is much pain complained of in each changing of the dressing, examine the surface carefully, and we shall mostly find there are certain parts painful, and others not so. The painful points are the spots where nerves are lying exposed on the surface; and if such spots be protected with a small piece of isinglass or gutta-percha tissue, all other parts of the wound may be dressed without any hurt to the patient; and this is a means of relief from pain so often coming under our notice, that it is only necessary to mention it to claim for it attention.

Now, take a wound left after amputation of the breast, and let care have been given to staunch all bleeding, and let the line of incision have been so arranged as to leave an end of the wound in a dependent position. The wound may be drained by the insertion of a tube, say of perforated India-rubber, along its entire length, one end being left projecting at the dependent point. I say nothing about the carbolicising of the wound, as I am now dealing rather with the treatment so far as pain avoidance is concerned. Then bring the wound together by means of main stays. Then close its edges with silver sutures, from which, as the wound swells, tension will be largely taken by the main stays we have introduced. Apply the dressings, not too tightly, or the movements of respiration will make the costal surface of the wound rub upon the more superficial; and then place the forearm and hand across the chest, and secure them against sudden starts by a bandage lightly passed from the wrist round the neck, supporting the elbow, and to the wrist again. Seven or eight hours later, cut through the strapping with which you will find it the more simple plan to have secured the dressings, and, with a sense of relief to the patient, they will separate an inch or more; a strip of plaster will reunite them, and, whenever the wound has to be dressed, this strip should be cut through and a new one placed over it, the originally applied plaster never being removed, because, especially if from a hairy surface, its removal is attended with much discomfort. When the wound has to be dressed, slip the bandage from the wrist, and then grasp the arm above the elbow firmly in one hand, and with the other move the hand and forearm to a straight line with the arm; then, still grasping the arm, move it out from the side so far as you may think fit. By this guarded movement, you will prevent the sudden and involuntary contraction of the biceps and of other muscles, which, if the arm be not steadied, will assuredly occur, and will be followed by a corresponding jerk in the pectorals, disturbing the wound and causing the patient to cry out with pain. The dressing is then removed and renewed, and, using as I do carbolicised oil on lint, protected by gutta-percha tissue, this part of the operation is most simple. See that the draining-tube is acting properly, and renew some tenax in the axilla, or a small sawdust pad, to catch the discharging serum, if any, and then carefully replace the arm and then the forearm to its original position. Tended in this way, we are certain of conducting our case without an ache or a pain, so far as the dressing of the wound is concerned.

I have already referred to the dressing of amputation-wounds, and this model will show the plan, which I described in several of its details before the Association some years ago. The limb is steadied by being secured on a back splint; it is allowed to swing easily whilst so secured, and, by the dropping of the end of the splint, the dressings can be renewed without pain—without, indeed, the patient's knowledge. But, to show how nicely the details have to be arranged, it may be added that the least roughness in handling, causing but a slight jolt of the apparatus, will be followed by a cry of pain, reminding us of the ease with which may be produced the suffering we study to avoid.

I do not speak of the use of opium in its varied forms. My contention is that pain is to be avoided; and, therefore, it is no part of my present purpose to refer to its being masked. Yet, I would add that, as want of sleep begets restlessness and discomfort, it is always well to guard against such trouble by making sure that, after an operation, there shall be good sleep—it matters not at what time of the day, for it is often undesirable to wait for night before giving the sedative. It is, therefore, a rule with me always to give morphia (injected beneath the skin, so as not to disturb the stomach after the anæsthetic) after every operation on adults, and sometimes after those on children.

But I must detain you no longer than is necessary to ask your indulgence for having spoken to you on this detail. Our work is the culture of practical surgery. It is well, no doubt, to inquire into the pathology of disease, and to discuss remote questions of cause; interesting and sometimes important results flow from such inquiries. But, face to face with the practice of our art, it is the question of treatment which forces itself to the front. I have sought to speak to you as from the

bedside of the patient: and I venture to hope that we may count it as a practical gain if, by careful attention to the details I have mentioned, we can take from operative surgery that dread with which it is so commonly associated—the dread of pain.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE,

*At the Annual Meeting of the British Medical Association,
in Bath, August 1878.*

By ALFRED H. MCCLINTOCK, M.D., F.R.C.S.I., LL.D.,
President of the Section.

DEATH-RATES IN CHILDBED.

My first impulse and duty on taking this chair is to express a deep sense of the honour conferred upon me by the request that I should preside over the Obstetric Section of the Association on the present occasion; and I gladly seize this opportunity of thanking our President, Dr. Falconer, and the Committee of Council, for their selecting me for this office.

The compliment thus paid is greatly enhanced by the consideration that, among those who in past years filled this position, we find the honoured names of Locock, Farre, Duncan, Barnes, Beatty, Evory Kennedy, and Priestley—all men of eminent ability who have earned enduring reputation by their varied and valuable contributions to this department of the healing art.

The entire number of these past presidents is comparatively small, and the reason for this is worth mentioning, as it marks an epoch in the history of this great Association. Up to the year 1867, the work done at the annual meeting was not subdivided into Sections as it now is; in that year, however, the thirty-fifth annual meeting took place—Dublin being the city where it was held—when a more profitable and systematic arrangement of the papers and discussions was effected, by classifying them under the appropriate heads of Medicine, Physiology, Surgery, and Midwifery—each Section having its own President, Vice-Presidents, and Secretary.

This division of labour, as might be expected, was found to work most satisfactorily, and, as you all know, is now carried out to the fullest extent, and with the greatest advantage. In fact, without a strict regard to this arrangement of subjects, such is the magnitude of the Association, that there would be nothing but confusion and disorder at our meetings.

Of late years, the number of communications in the list of this Section has been so great that, even with the utmost economy of time, they could not all be read. This was notably the case last year at Manchester; and, when the session closed, a resolution was passed, voting that "they all be considered as having been read". In consequence of this pressure on the time of the Section, I shall not in these remarks exceed the limits permitted to an ordinary communication.

A question of very great interest and importance was started some years ago, and has been the subject of special investigation by Le Fort, Evory Kennedy, Matthews Duncan, myself, and others. This question is, "What should be regarded as the average mortality among women dying in parturition and the four weeks immediately succeeding?" In other words, what is the death-rate among women in childbed?

A variety of causes concur to keep up error and misconception on this point, most of which have been pointed out by Matthews Duncan and myself. But the worst of it is, the false standards which have been put forward, especially by Le Fort and Kennedy, are calculated to deter most men from publishing the actual results of their experience, and to disparage very materially the practice of lying-in hospitals by making the death-rate therein appear so inordinately high. For example, Le Fort takes 1 in 212 as the rate of mortality among women attended at home by maternity charities, and forthwith assumes this to be the true standard of comparison. Dr. Kennedy took the mean mortality in three very small provincial lying-in hospitals—this mean being 1 death in 282 cases; and this is the standard he erects wherewith to test the practice of all such institutions. Is it any wonder if the application of such a standard should exhibit a death-rate of appalling magnitude?

So far back as May 1869, I ventured to lay down as the deduction from a large collection of cases treated in private practice by several men of character and eminence—that 1 death in childbed out of 125 patients was about the true average; and this, mind you, among

patients in comfortable circumstances treated at their own homes by competent and highly skilled accoucheurs.

Matthews Duncan has investigated the question before us with that rigorous logic and careful discrimination of data which strongly characterise all his writings; and the following is the conclusion at which he arrived as the best approximation to the truth that he could make, viz., that "not fewer than 1 in every 120 women delivered at or near the full time die within the four weeks of childbed".

In the nine years which have elapsed since the publication of my paper on this subject, I have collected some more data, the result of which tends not only to confirm my former statement, but to show that the actual rate of mortality is even higher than the one I then laid down, that 1 in 100 would, perhaps, more correctly represent the lethality among women in childbed.

Le Fort says that the published statistics of the private practice of several English accoucheurs show a rate of mortality not exceeding 2 or 3 in 1,000; and Simpson has stated that the mortality of childbed is now 1 in 150 or 200. But these are mere empty assertions, and destitute of any real value. Before the stern logic of facts they utterly break down. I do not mean to weary you, gentlemen, with statistics, so I shall just briefly mention the sources of my additional data.

Dr. Campbell, out of 1,500 private patients attended by him in Paris, lost 13.

Simpson, in the only two years—and we suppose they were not the worst years—that he reported the results of his private practice, lost four patients out of 180.

Matthews Duncan, in the years of his practice of which he preserved records, had 8 deaths in 736 cases.

Out of 1,000 consecutive patients in my own private obstetric practice, including forty cases of abortions, I find from my register that 12 died within the month, viz., 2 of scarlatina, 1 of pertussis, 2 of hæmorrhage, 1 of convulsions, and 6 of metria.

Uvedale West—a most accurate observer and faithful reporter—has published the results of 3,100 midwifery cases in his own private practice; and the deaths among these were 23 in number.

Dr. Thomas Hamilton's midwifery practice in a country district of Scotland gives the following result, viz., 7 deaths out of 402 cases.

Dr. Charles Egan reports 400 midwifery cases among Europeans in British Kaffraria, and among them were eight maternal deaths.

Dr. W. T. Greene has published an analysis of his private practice among the lower-middle and labouring classes of a London suburb; and the total number attended during a period of eight years, ending in 1877, was 1,500, of whom 12 died.

Lastly, Dr. George Jones has reported 2,000 consecutive midwifery cases, with a total of 16 deaths.

Now, when we sum up all these figures, what is the result? Simply this, that nine accoucheurs have reported 10,818 midwifery cases occurring in private practice; and that out of this number 103 women died, being a death-rate of 1 in 105 as nearly as possible. We may be perfectly certain that the above returns do not in any way exaggerate the number of deaths; nay, I feel sure that, if anything, they underrate their proportion. The omission of a death might easily occur, but the addition of one seems the next thing to an impossibility.

In contrast to the above figures, it may be urged that there have been published records of midwifery practice with only one death in every 300, 400, or even 500 cases. A splendid result, I freely admit; but so very exceptional that in my judgment its correctness should be rigidly tested before it be accepted as absolute fact; and the first question I would ask is this, "Has the result of every individual case been noted down in the register at the end of the puerperal month?" Where the facts and items are not so recorded, the data are wholly unreliable; and this specially holds good where the compiler or reporter was not himself the observer of the cases.

The omission of a death in private obstetric records may happen in different ways. A common one is this. Dr. A. delivers a patient, and another practitioner, Dr. B., takes up the attendance sooner or later after delivery. Eventually, this patient happens to die. The death does not appear in Dr. A.'s register, as she did not die in his hands; and the case is not entered in Dr. B.'s register, for he did not deliver her; and so it comes to pass that the death is unrecorded. True it is, both Dr. A. and Dr. B. are in one sense correct, and we cannot blame them; yet their statistics yield a false result.

In the public registration of deaths, it is certain that, in all the cases of women dying in childbed of some apparently non-puerperal disease, this disease alone is entered as the cause of death. Now, I have elsewhere demonstrated that over one-fourth of all the women dying in childbed perish from some disease not essentially or properly puerperal in its nature. Hence, it follows that we must increase the number of registered deaths of childbed by one-third; in order to ascertain how

many deaths actually took place in childbed. Let me illustrate this: 11,722 women were registered as dying of childbed in England in the years 1838 to 1841 inclusive, the rate of mortality being 1 death to every 168 women confined. But, on the principle just laid down, the number of deaths occurring in childbed within this same period should have been 15,629, which would make the death-rate 1 in 126, instead of 1 in 168—a very material difference, you perceive.

I am satisfied a great deal of discrepancy has arisen in the returns, public and private, of obstetric practice, from the distinction of deaths in childbed and of childbed not being attended to. Accuracy on this head should be carefully observed in order to make just comparisons. Whilst on this subject, let me mention two other sources of fallacy in obstetric mortality reports. One of these is abortion. By some reporters abortions are included in the general total, and by others they are not. But it should always be specified whether cases of abortion are comprehended in the report, and what their number is.

Again, consultation cases should be kept distinct and apart in all reports of private practice where the death-rate is shown. To include them without giving the result of the case, would obviously be unfair; whilst to give the result would augment the death-rate to the prejudice—but most unjustly so—of the practitioner; for, the higher a man's reputation stands, the greater will be the proportion of difficult and dangerous cases falling to him; and the same precisely holds good of hospital experience, so that, paradoxical though it may appear, it is yet quite true to assert with Dr. Bristowe and Mr. Holmes, "that a high death-rate indicates, as a rule, that a hospital fulfils efficiently the purposes for which it was designed; and that a low death-rate, on the other hand, indicates (*ceteris paribus*) comparative inefficiency".

I lately received from Professor Lusk of New York a most interesting and elaborate paper On the Nature, Origin, and Prevention of Puerperal Fever. It contains one very striking fact which tends to support the estimate I have put forward as the true death-rate of women in childbed. This fact I now mention.

A careful analysis made by Dr. Lusk of the vital statistics of New York for the nine years ending 1875, shows that the total number of deaths to the total number of confinements would be, at least, in the proportion of 1 to 85, and the deaths from puerperal fever alone, in the proportion of 1 to 146.

Most of the data used by me in this paper take in women of the upper or middle classes, and residing in cities. Now, the deteriorating influence of civilisation on the physical development and animal functions of females is undoubtedly greater in such women than in those of inferior rank and among a rural population; and, if so, the injurious effects of childbearing should be more apparent among the former. This, I say, would be a not unreasonable inference, and has, I think, some support from statistics. However, it is one of those questions which yet remain to be worked out when the requisite amount of data have been accumulated.

Let me now, gentlemen, bring those cursory remarks to a conclusion. I really feel that some apology is due for having occupied any portion of your time with so dry a subject, when many papers of great interest and practical importance await your hearing.

PROPOSED DISINFECTING CHAMBER FOR BELFAST.—At the quarterly meeting of the Belfast Town Council, held last week, the report of Dr. Browne, the medical superintendent officer of health, on a disinfecting apparatus, was under consideration. In January last, Dr. Browne called attention to the importance of observing certain measures for the prevention of the spread of contagious diseases, among these, the adoption of a high temperature for the destruction of disease germs, and the use of various disinfectants, such as chlorine gas, sulphurous acid vapour, carbolic acid, and destruction by fire where the clothes and bedding were so worn and filthy as to be unfit for being washed and purified, being recommended. With the exception of erecting a disinfecting hot air apparatus, all the other means have, for the last three years, been carefully used, and seemingly with beneficial results, especially in keeping the late epidemic of small-pox in check. Lately, the question of erecting a hot air disinfecting apparatus by the Town Council, has arisen; and Dr. Browne, along with most sanitarians, believes that the application of a high temperature (from 212 deg. to 380 deg.) is the best and most certain means of destroying the germs of disease which are generated about the bodies of patients affected by small-pox, scarlatina, typhus, measles, dysentery, and diphtheria, and which are retained in the clothing. The probable cost would be from £1,200 to £1,500, and the annual cost of such a sanitary appliance close on £300; but the Sanitary Committee of the Corporation believe that at present it is not necessary, so no steps have been taken in the matter.