CONCERNING MATERNAL MORTALITY IN CHILDBIRTH.

BY

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MUCH that has been said and written recently concerning maternal mortality in childbirth points to a general dissatisfaction with the manner in which parturient women are looked after. To ascertain where the blame for the admittedly unsatisfactory state of affairs lies it is necessary to consider the part played in obstetric practice by four separate groups of people—namely: (1) the general public, from whom parturient women are derived; (2) those who teach obstetrics; (3) those who practise obstetrics; and (4) the public health authorities and the Ministry of Health.

THE GENERAL PUBLIC.

What in the past has been the attitude of mind of the general public towards childbirth? I do not think anyone will quarrel with the statement that the vast majority of the general public look upon childbirth and the rearing of children as the natural occupation of women, and upon the act of childbirth as a natural process which must of necessity be normal. From these premisses the conclusion has been derived that Nature is the best obstetrician, and that the only help a parturient woman requires can be quite satisfactorily obtained from some other woman who has "gone through" with it herself, preferably on a sufficient number of occasions to be able to show a quiverful and to refer to the obsequies of several others. This attitude of mind might be justified in the case of a multipara who has three or four normal confinements to her credit, but to apply it to a primipara is absolutely unjustifiable—in fact, one might almost call it criminally negligent. It assumes that during the 274 days of pregnancy which precede labour the great obstetrician Nature is quite capable of looking after an expectant mother, and that as a parturient woman may expect to go "twice round the clock" before she delivers herself, it is quite unnecessary to send for assistance until she has exhausted herself in her efforts to overcome a difficulty which could quite certainly have been rectified had assistance been obtained earlier. By earlier I mean not only earlier in labour, but earlier in pregnancy—nay, even before pregnancy had begun.

Not very long ago, a rickety dwarf was admitted to one of my beds in hospital for repair of an extensive laceration of the perineum extending two or three inches into the rectum. She had received no ante-natal supervision whatever, and the doctor was not sent for until she had been in labour for over twenty-four hours. When finally he did arrive the child was dead, and a craniotomy had to be performed.

Had that woman been seen by any doctor any time after she had reached maturity, she would have been told that she would have to be delivered by Caesarean section, the pelvic deformity being so obvious. The general public must be made to realize that Nature is by no means a good obstetrician, especially in first confinements; that competent supervision during the 274 days of pregnancy which precede labour is infinitely more important than supervision during the early stages of labour; and that when the question of obtaining medical assistance during the later stages of labour arises the words "once round the clock" must be substituted for "twice round the clock."

THOSE WHO TEACH OBSTETRICS.

Obstetrics is taught to medical students by obstetric specialists on hospital staffs; to midwives it is taught by obstetric specialists, but to a greater extent by the matron and sisters of lying-in hospitals. Both these sets of teachers find it impossible to reproduce the conditions in which the majority of their pupils will eventually have to work. They therefore start their task of imparting clinical obstetric

knowledge with an almost overwhelming handicap, and it is a matter of great regret that the lot of the teachers of medical students is very much worse than that of the teachers of midwives.

The regulations of the Central Midwives Board with regard to the training of midwives are excellent. Every midwife is compelled to call in medical assistance in all cases where the presentation is not an uncomplicated vertex or breech; I do not propose to offer any criticism on this point beyond saying that it is not always easy to assert that a given vertex or breech is uncomplicated. The special curriculum in obstetrics required for a medical student is quite another matter. Take, for example, that required for the Conjoint Board: all teachers and examiners in obstetrics are agreed that it is inadequate, but the time of medical students is so fully occupied with other work that it is practically impossible to extend the obstetric curriculum. It is not this, however, that handicaps the teaching of obstetrics. Consider the position of the resident obstetric surgeon of a lying-in hospital. He finds himself responsible for the welfare of a large number of expectant mothers in his district. He knows that when these women go into labour they will be attended by inexperienced nurses, some of whom are still undergoing their training, and by undergraduates whose knowledge of clinical obstetrics is negligible. He therefore impresses on his pupils that there is never any occasion to hurry in the early stages of a confinement; that most confinements may end naturally (which, however, is not to say normally); that in the event of assistance being required the less examination the patient has been subjected to the better; and that at the first visit all that is necessary is to ascertain that the woman is in labour and that the presentation is a vertex. Both of these points, he teaches, can be determined by abdominal palpation, and by abdominal palpation only. The making of a digital vaginal examination is considered to be extremely dangerous, and in certain quarters a rectal examination is advocated as a lesser risk. The whole of his teaching is based upon the policy of "wait and see"; but unless he is a superman he gives his pupils clearly to understand that if he is routed out of bed unnecessarily it will not be to their advantage. In this policy he is amply justified, because he knows that if anything goes wrong and he is sent for, he has at his back an ambulance service, a fully equipped lying-in hospital with a sterilizing department to supply him with a sterile obstetric outfit, a labour ward, an operating theatre, and a specialist to help him should a major obstetric operation be necessary. Last, but not least, he has an ante-natal department, where all abnormalities are detected and admitted to the hospital. The unfortunate result is that the pupils rarely see an abnormal case on the district, and are only shown how to manage difficult labours in ideal surroundings.

Can such instruction be translated into private practice? Consider what may happen if the practitioner fails to hurry when rung up to go to a confinement. The usual answer to the question "When will the baby arrive?" is "You must expect to go twice round the clock." At the end of twelve hours the answer to the same question may be "Confinements are often very slow—please don't worry." But at the end of twenty hours the statement that "a specialist should see the patient" will probably be met by the question "What will his fee be?" When at last the consultant arrives he finds that he has to do his work in most unsuitable surroundings, unless the patient can afford to go to a nursing home, and even then there is no ambulance service available for her removal.

There is, therefore, no doubt that before a newly qualified medical practitioner can conscientiously attend a confinement in private practice he must find some opportunity for post-graduate instruction. One would go so far as to say that it is the duty of all medical practitioners who propose to attend confinements to obtain this additional training and knowledge.

THOSE WHO ATTEND CONFINEMENTS.

Midwives chiefly attend people who are unable to afford to engage a doctor as well, and I can think of no one more suitable to attend a *normal* confinement than a fully qualified competent midwife. In quite a large number of cases she

is actually on the spot before the patient has started labour. Once labour has started she is able to give up the whole of her time to her patient until the labour is finished, and she is in constant attendance on her patient for the first ten days of the puerperium. To prevent her doing more than to "wait and see" she is only allowed to take with her to a confinement an appliance for giving a vaginal douche, an appliance for giving an enema, a pair of scissors, a clinical thermometer, and a nailbrush; and the moment she finds herself in any difficulty she is expected—nay, even compelled—to send for medical assistance.

This is where her troubles begin. If she is lucky she has a doctor whose post-graduate training has given him a considerable knowledge of obstetrics; if she is unlucky she may call one with less experience and training, but who none the less has a qualification which allows him to use morphine, hyoscine, chloral, pituitary, chloroform, rubber gloves, axis-traction forceps, perforators, cranioclasts, intrauterine douches, and goodness knows what besides.

Now there are a small number of medical practitioners who specialize in obstetrics. What this really means is that these men have devoted a considerable amount of time to the post-graduate study of clinical obstetrics, that they are prepared to limit their work to obstetrics and gynaecology, and that when attending a confinement they are ready (at an adequate remuneration, of course) to give up their time to a personal supervision of the case, provided a fully trained maternity nurse is engaged and the patient is in suitable surroundings. Also, before undertaking to attend a case, they insist that they must be given a free hand with regard to ante-natal observation. In the confinements attended by these men the number of women who are allowed to go twice round the clock and deliver themselves unaided is non-existent. Statistics can, of course, prove anything, and can also be explained away, but I know of a nursing home which took in 147 confinements in one year, of which 95 cases were complicated and 52 terminated in natural delivery. The complicated cases comprised 29 Caesarean sections, 16 inductions, of which 5 demanded the use of forceps as well, and 50 forceps deliveries. All the natural deliveries had chloroform, and most of them had some form of morphine and hyoscine in the early stages of labour. All that these figures show, however, is that Nature is not always to be relied upon in dealing with a pregnant woman.

In addition to the specialists there is a very much larger number of medical practitioners who combine obstetrics with their general practice. They do their obstetric work in less favourable circumstances than the specialists. They find it difficult to persuade their patients that ante-natal supervision is so important, and in a busy general practice it is sometimes difficult to find the time to carry out this supervision adequately. Once a patient goes into labour it is often impossible to neglect the rest of the practice until the labour is over. Can it be wondered, then, that many of these eminently competent practitioners intensely dislike the obstetric part of their work? The general public do not grumble if the family doctor refuses to remove their tonsils, extract their teeth, or ligature their piles—but if he does not attend confinements they go elsewhere. One notices with interest and with satisfaction that all over the country the tendency is towards the formation of small groups or firms of medical men, each with his own special part in the practice, but each prepared and thoroughly competent to carry out the ordinary work of any of his partners. Should a woman go into labour the partner whose job it is feels himself at liberty to devote as much time as is necessary to the case, secure in the knowledge that the rest of his work is being looked after by his colleagues.

I feel certain that on lines like these is to be solved the problem of the care of pregnant women belonging to the class which can afford to have the attention of a doctor and a maternity nurse. But at a conservative estimate only about 25 per cent. of labours in the country are attended by the two classes of medical men just referred to. The other 75 per cent. are among women who cannot afford to have both a doctor and a trained maternity nurse. These women either bespeak the services of a doctor—

without, however, expecting much attendance from him unless anything goes wrong—and have a handywoman to "see them through," or they engage a midwife. Now I maintain that the ultimate responsibility for adequate attendance on these women rests with the Ministry of Health under the Insurance Act, or with the public health authorities. Under the Insurance Act what is called a maternity benefit is given to an insured woman or to the wife of an insured man. This benefit takes the form of a sum of money, which is paid out, as a rule, through an approved society after the confinement, and covers a period of four weeks from the confinement. The Act makes no stipulation as to how this sum of money is to be expended, and no provision for ante-natal observation, but by giving the grant the framers of the Act have definitely assumed that they are to some extent responsible for the welfare of its recipients.

In a good many of the London boroughs the public health authorities have opened ante-natal clinics and maternity beds for poor patients, but these clinics do not definitely co-operate either with the Ministry of Health or with medical practitioners in the borough, the attendance of expectant mothers is entirely voluntary, and no provision is made for the conduct of labour in the women's own homes. There are, furthermore, 847 infant welfare and ante-natal clinics scattered throughout the country. These are philanthropic institutions which make us proud of our country; at present these centres receive money grants in aid of their work from the Ministry or public health authorities. The actual results of these various attempts to deal with the situation are not altogether encouraging. In illustration I would cite the following case.

A primipara engaged a midwife, but did not think of going to see her until a week before the baby was expected. The midwife, finding that the patient was suffering from headache and swollen ankles, advised her to see a doctor. The patient went to an ante-natal clinic, where it was found that the urine was loaded with albumin, and she was most strongly urged to go at once to a hospital. She went home to consult with her husband and mother, and did not act on the advice given to her at the ante-natal clinic. The next that was heard of her was when she had had two eclamptic fits. Everything possible was done, but the woman died.

Now all the persons concerned in this case did all that was expected of them, but as no one was actually responsible no treatment was actively undertaken until too late. Proper co-ordination between the midwife, a medical practitioner, the ante-natal clinic, and a hospital would have prevented the catastrophe.

It would not be difficult to cite other cases, but the outstanding features of them all have been the same: an absence of any organized co-operation between the various parties concerned; some abnormality in labour which, owing to the accepted "wait and see" policy, was not diagnosed until too late to be rectified easily; some form of internal examination or operation which necessitated the introduction of the hand into the uterus, or the use of instruments; and an exhausted patient with an exhausted uterine muscle which was incapable of dealing with the third stage of labour adequately.

I have still to be convinced that digital vaginal examination is a source of danger to a woman in labour. I am prepared to argue that anyone who has not sufficient surgical knowledge to make such an examination in a surgically clean manner has no business to attend a confinement. Cases of puerperal infection have been reported where no examination of any kind has been made. If one takes into consideration the surroundings in which so many confinements take place, the only wonder is that serious intrauterine sepsis is not more prevalent than it is. That a subacute puerperal infection is extremely common has been abundantly proved by the work of Dr. Remington Hobbs, but at present we are only concerned with the maternal death rate, of which 80 per cent. is due to some form of sepsis. The history of the cases of severe puerperal sepsis in which I have been consulted have a number of features in common: a long labour, probably a primipara, an exhausted patient, and an exhausted uterus, possibly an instrumental delivery, certainly a third stage with a retained placenta or post-partum haemorrhage; and then has gone in more than the index finger in circumstances and surroundings which court disaster.

FINAL CONCLUSIONS.

I have been forced to the conclusion that, in primiparae at any rate, a normal labour—that is, a labour completely free from abnormality—is not a common occurrence. In the normal labour of a primipara the head should be engaged a week before labour starts, and the membranes should not rupture until the os is fully dilated; yet at least 50 per cent. of first confinements occur without the fulfilment of one or other or both of these conditions. If, however, the head does not engage until uterine contraction begins, and, as frequently happens, an enema has not been administered within an hour of the commencement of labour, the loaded sigmoid prevents the occiput from descending readily. In consequence the head enters the brim slightly extended, and the occipito-bregmatic diameter takes the place of the suboccipito-bregmatic. This causes very definite delay in anterior rotation and abnormally long first and second stages. If, moreover, extension takes place while the head is crowning, the extra half-inch of the engaged diameter causes a tear of the perineum. When the second condition is not fulfilled the anterior lip of the cervix tends to get pushed downwards in front of the occiput. This not only causes severe pain to the woman, but increases enormously the strain on the cervico-pubic portion of the fascial support of the anterior wall of the vagina. The best treatment is to push up the anterior lip during three or four consecutive pains by digital pressure, but owing to the fetish against vaginal examination the condition is neither diagnosed nor treated. The result is unnecessary and prolonged pain for the patient at the time, and in a very large number of cases a definite rupture of the cervico-pubic fascia. How often this occurs one realizes on recalling the number of women who, after they get up from a confinement, complain of bladder trouble and even slight incontinence of urine, especially on coughing. This rupture of the anterior fascia is the first stage of a subsequent prolapse, and there is no doubt in my mind that unnecessary prolongation of the first stage of labour, with the undue strain on the pelvic floor which it entails, has more to do with the production of prolapse than anything else. The remedy is to preach the doctrine of surgical cleanliness, and so to allow of an early diagnosis of a difficulty to be made while time remains to rectify that difficulty easily.

It would take too long to enter into details as to how the proposed co-ordination between the Ministry of Health, the public health authorities, the welfare centres, and the practitioner can be effected; but one thing leaps to the imagination: the Ministry of Health grants a cash maternity benefit. It is surely within its powers to make the payment of this benefit dependent on proof of adequate ante-natal observation. This certificate of observation could be obtained from the patient's medical attendant, an ante-natal clinic run by the public health authorities, a welfare centre, or a lying-in hospital. I am certain that many general practitioners who attend expectant mothers would welcome co-operation with the clinics and centres. Pregnant women would soon realize that they must get in touch with a doctor or a midwife early in pregnancy. Many doctors, knowing that the clinic was not run in opposition, would be glad to be relieved of the work of ante-natal supervision. During pregnancy they would remain in charge of the patient's general health, and the moment any special symptoms showed themselves, being in touch with the ante-natal clinic, they would be in a position to co-operate immediately to the best advantage of the patient.

With regard to the actual attendance at the confinement, a midwife or a maternity nurse would always be in attendance in the early stages, and it would be simply a matter of arrangement between the parties concerned whether she would send for the medical practitioner or to the ante-natal clinic as soon as she began to suspect some abnormality. It should also be possible for midwives and general practitioners to obtain sterilized obstetric outfits from the clinics and centres.

That some scheme such as this is within the range of practical politics is proved by the fact that the Ministry of Health has already taken over the treatment of venereal

disease throughout the country among the same class of patient which would be looked after by this suggestion. But the general public, like the ostrich with his head in the sand, is a curious bird. As long as a danger is not absolutely obvious it is difficult to get people to realize that preventive measures are infinitely better than measures for treating bad results. The person suffering from syphilis is an obvious danger to the community; but the parturient woman does not obtrude herself in the community until she dies—and then it is too late.

PARATYPHOID FEVER IN LONDON.

REPORT ON THE 1928 OUTBREAK.

THE outbreak of paratyphoid fever which occurred in London and several of the Home Counties during the end of July, 1928, and continued throughout August, gave rise, it will be remembered, to a considerable agitation in the press and in certain interested quarters, in favour of altering the law relating to the use of preservatives in food. In a leading article (August 18th, p. 316) discussing the outbreak we expressed the opinion that "there would be no additional security to the public against outbreaks of this character were a 'minute quantity of boric acid' permitted to be added to cream as a preservative. It is not in the public interest that an outbreak of infectious disease calling for calm and experienced investigation should be made the subject of a newspaper stunt, and exploited to revive a practice which has been abolished in America and in regard to which, as the result of careful, prolonged, and skilled inquiry, official prohibition has tardily followed in this country." Confirmation of this opinion is now given in the report of his investigation presented by Dr. J. A. H. Brincker to the medical officer of health to the London County Council, and published this week.¹

Etiology and Incidence.

The report opens with a general discussion of the etiology of typhoid and paratyphoid fevers, and of the peculiarities exhibited by the outbreak in question. Dr. Brincker points out that whereas cases of illness exhibiting prostration, continued fever, and abdominal symptoms were till comparatively recently all notified as typhoid, or continued fever, the use of bacteriological methods has made it possible to allocate the majority of such cases into the categories to which they belong—namely, typhoid fever and paratyphoid A, B, and C. The micro-organisms of these diseases, with certain kindred pathogenic organisms, such as Aerttrycke's and Morgan's bacillus, which are associated with outbreaks of food poisoning, are responsible for the Salmonella group of diseases, which all result from the ingestion of appropriately contaminated food or drink.

During the war there was some expectation that *B. paratyphosus* A, B, and C, together with Aerttrycke's and Morgan's bacillus, hitherto comparatively uncommon in this country, might be brought into it by troops who had contracted and recovered from the corresponding diseases in countries where they are normally endemic; this expectation has not been fulfilled. What higher incidence of paratyphoid there has been in London since the war may be due to the better methods of diagnosis and the wider recognition of the disease as a separate entity; on the other hand, the infrequency of the post-war outbreaks demonstrates that modern sanitation, increased vigilance on the part of sanitary authorities, and possibly the absence of conditions that favour the spread of the disease, have combined to keep the risks in check. Apart from occasional outbreaks, usually traceable to a specific cause—namely, infected food—efficient supervision and control of foodstuffs, milk and water supplies, shellfish beds, and so on, has limited the occurrence of enteric fever to sporadic cases.

A comparison of the notifications and deaths from enteric fever in London during the ten years preceding the war with those for the ten post-war years illustrates not only that the fears of a greater prevalence of enteric fever following demobilization were not realized, but that the disease has considerably declined. Thus, in 1905, there were

¹ Outbreak of Paratyphoid Fever. Report by the Medical Officer, London County Council. No. 2643. Price 1s.