

## Part Second.

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### REVIEWS.

*On the Mortality of Childbed and Maternity Hospitals.* By J. MATTHEWS DUNCAN, A.M., M.D., etc. Edinburgh: Adam and Charles Black: 1870.

THIS work, which possesses the highest merit, and is a fresh evidence of the ceaseless activity and great mental grasp of its author, is essentially a defence of hospitals generally, maintained from the standpoint of maternities. As these are allowed on all hands to be the most objectionable class of hospitals, Dr Duncan, with great reason, argues that if it can be shown that a well-managed maternity yields results not much, if in any degree, inferior to the best private practice, then the agitation raised of late against such institutions is proved to be without foundation. To show that well-managed maternities give results nearly, if not quite, as good as private practice, is the principal theme of the work, and it is executed with great ability and thoroughness.

Finding it practically impossible to ascertain directly, with any degree of accuracy, what the mortality of childbed really is, owing to the fact that medical men do not make their returns on a uniform principle, Dr Duncan sets himself to the task of discovering what is the mortality during the four weeks succeeding parturition, which he holds can be got with considerable correctness. All deaths occurring, from whatever cause, during these four weeks, Dr Duncan defines as deaths *in* childbed; while all deaths directly connected with childbirth, together with all deaths resulting from puerperal fever, he terms collectively deaths *of* childbed.

Assuming as true the statistical results brought forward by Dr M'Clintock in the late discussion of the hospital question in the Dublin Obstetrical Society, to the effect that, practically, 25 per cent. of the whole deaths occurring during the four weeks of childbed are referable to causes other than childbirth and puerperal metria, he thus obtains data by which to calculate the deaths *of* childbed from the deaths *in* childbed, and *vice versa*.

As hospitals are debited with all deaths, from whatever cause, occurring during the childbed period, both Dr M'Clintock and Dr Duncan maintain that, in order to institute a just comparison between the maternity statistics of hospitals and those of private practice, the latter must be looked upon as only representing 75 per cent. of the real mortality *in* childbed.

Next, from an exhaustive examination of hospital reports, of the reports of Registrars-General, from private search of public records, and from the published reports of private practice, Dr Duncan is led

to the conclusion, which will no doubt be startling to many, that not fewer than 1 in every 120 women delivered at the full time die within the four weeks of childbed.

Having thus far established his position,—that the general mortality *in* childbed is much greater than that asserted by Le Fort and Sir James Simpson,—Dr Duncan takes advantage of data and arguments, the most of which have previously been before the public in his work on “Fecundity, Fertility, Sterility, etc.,” which he believes warrant, among others, the following important conclusions:—

1. In regard to the number of the labours.

The mortality of first labours is about twice the mortality of all subsequent labours taken together, but the risk of death following labour increases with the number of the labours *above nine*; and the same is true in either case of the mortality following puerperal fever.

2. In respect to the influence of age on childbed mortality.

The age of least mortality in childbirth is 25 years,—before and after that age, mortality gradually increases; but youthfulness has less influence in producing mortality than elderliness.

3. In regard to the effects of the duration of labour upon childbed mortality, Dr Duncan maintains the two following propositions:—

I. “The mortality of women in parturition and childbed increases with the increasing duration of labour (in an undetermined ratio).”

II. “The duration of labour is only an inconsiderable item among the many causes (single or combined) of the mortality of women in parturition and childbed.”

Though we believe these two propositions are essentially true, we think that this is the portion of the work least logically coherent with the general aim of the author, and that his arguments here fall somewhat short of his usual vigour.

In the subsequent part of his work, Dr Duncan proceeds to discuss several questions bearing directly on maternity hospitals in the light of the statistical results arrived at in the previous part of the book.

In regard to aggregation as a source of danger to lying-in women, Dr Duncan, from a most fair and exhaustive analysis of the mortality of the Dublin Lying-in Hospital from its commencement in 1757 to the end of 1868, is led to the conclusion that “the mortality of the Dublin Lying-in Hospital does not increase with the increased number of the inmates—does not rise with the aggregation. The mortality of the Dublin Lying-in Hospital is neither in the direct nor in the inverse ratio of the aggregation.” The results of this analysis, which, Dr Duncan thinks, demolishes completely Dr Evory Kennedy’s Redan proposition,—“that the generation and absorption of this contagion (puerperal metria) is in a direct proportion to the number of parturient females cohabiting in a given number of feet of atmospheric space at their parturient period, or who

breathe the same atmosphere when lying-in,"—seem to us, perfectly convincing, except on one point, which we are sorry Dr Duncan has not noticed. What we refer to is, that Dr Duncan does not state whether or not, with the increase of the numbers attending the Dublin Hospital, a corresponding enlargement was made in the building; for Dr Kennedy and others may fairly object to mere largeness of numbers being convertible with "aggregation,"—a fact which Dr Duncan evidently sees in his preliminary remarks to this chapter, when speaking of the health of London and other populous places. Of course, in its bearings upon the question of the usefulness of maternity hospitals, Dr Duncan's results place it beyond a doubt that a large number of cases may be admitted to an hospital without bad results; and thus he must be admitted by every one to have practically proved the point. It is only as a direct contradictory of Dr Kennedy's proposition that we conceive his argument is barely complete.

Respecting the relative amounts of puerperal metria in hospital and private practice, Dr Duncan's investigations lead to the conclusion, that in private practice puerperal fever destroys from 1 in 3·6 to 1 in 1·8 of those that die in childbed; while, in hospital practice, the deaths resulting from the same cause vary from 1 in 3·4 to 1 in 1·3,—results which are astonishingly similar.

Proceeding to the consideration of the problem whether maternity hospitals ought or ought not to exist, Dr Duncan is led to answer strongly in the affirmative, on the grounds that a well-managed maternity hospital yields results so nearly equal to the best private practice, that the difference may be easily accounted for by taking into consideration the large number of unfavourable and depressing circumstances under which patients labour who are compelled to seek the aid of such institutions.

Dr Duncan also joins issue with the late Sir James Simpson in regard to his views, that new hospitals have a much smaller mortality than old buildings, and his recommendation founded thereon, that hospitals ought to be periodically taken down and rebuilt, showing conclusively that the data bearing on this subject brought forward by that distinguished accoucheur, in regard to the Edinburgh and Glasgow Infirmaries, are very defective indeed.

In regard to the question of the size of maternity hospitals, the author thinks they should not be made larger than to accommodate from 1500 to 1600 patients annually; but his examination of the results of very small hospitals, singly and combined, do not lead him to look upon them with favour.

The work ends with a very suggestive chapter upon the Construction of Maternities, in which the author signifies his general acquiescence in the views of Rokitansky, Virchow, etc.,—that maternity hospitals should not be larger than to accommodate from 1500 to 1600 patients annually; that each maternity hospital ought to be provided with a special infirmary, completely isolated from

the maternity, and with entirely different attendants, to which, on the first appearance of puerperal fever, the patient or patients might be carried. Such infirmary he would have put under the care of a physician not engaged in obstetric practice.

After an outbreak of puerperal metria, Dr Duncan would have the maternity hospital completely cleaned, and kept empty of patients for about a month, during which time patients applying for admission to the charity should be attended in assigned numbers at the homes of certified midwives.

The perusal of the work has given us very great pleasure indeed, and we consider it a model of severe logical analysis applied to the numerical method of induction. We earnestly hope that it will have the effect which Dr Duncan desires, namely, to prevent those institutions, so useful to the sick poor, and so necessary to the progress of medical science, and even to the very existence of medical education, from being ruined by the false issue raised by the present panic; while it shall stimulate those in charge of hospitals to spare no effort to make such institutions more and more perfect, and to obviate the dangers which undoubtedly beset them. We think Dr Duncan's reasonings,—that it is unfair to argue, as Le Fort and Simpson do, against the whole class of maternity hospitals because some of them can be shown to be bad and badly managed, and that we ought rather to be guided by the results attained by a well-managed maternity,—are peculiarly to the point. We, however, desiderate much more extensive data in proof of the position taken up by Dr Duncan, after Dr M'Clintock, that, *practically*, the deaths *in* childbed are to the deaths *of* childbed as 100 to 75, since this assumption enters so largely into the author's arguments. We also do not think that Dr Duncan is strictly warranted in making use of the results attained by his private search of the Scottish registers, as affording data of deaths *in* childbed, seeing that the search extended over six weeks instead of four. For, on the one hand, the difference, however small, must tell unfairly in favour of Dr Duncan's opinion; and, moreover, every accoucheur is well aware that a certain proportion of deaths resulting from phthisis, which has been in abeyance during the period of utero-gestation, frequently terminates fatally in about six weeks after labour; and surely such cases are in no sense deaths *in* childbed. While, on the other hand, it may be objected that very few patients indeed remain in hospital for the full four weeks following confinement; so that a double source of error pointing in the same direction is introduced into the statistics.

We feel rather inclined to believe that his criticism of the results of outdoor practice of hospitals and dispensaries is unnecessarily severe; and we almost think that it is reasonable to suppose that their results should be considerably better than those of very high class practitioners, inasmuch as, though the patients of such physicians have all the skill, comforts, and facilities that wealth can

command, they are, nevertheless, liable to the disturbing influences that beset fashionable and artificial states of society.

Dr Duncan's deductions regarding the regularity of occurrence and the amount of puerperal fever, are, in our opinion, exceedingly valuable, and calculated to quiet the troubled minds of many accoucheurs who may have been educated into belief in the epidemic nature of that dire disease. But we think justice to Dr Duncan's own views ought to have made him more careful in stating precisely in how far he differs from the nomenclature of the distinguished foreign physicians, whose views he quotes in the last chapter, and with whom he states himself to agree in a general way. For, notwithstanding the author's caveat about the indefiniteness of terms, we think the hurried reader will be at a loss to see how Dr Duncan can use such strong terms at page 100 against the belief that puerperal metria is epidemic, and quote approvingly the statements of German physicians as to its epidemic nature at pages 161-3.

But, on the whole, we recommend the work as a just, scientific, and ably-reasoned defence of the hospital system, for which its author deserves the best thanks and sincere gratitude of all members of the profession anxious to get at the truth of the matter.

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*The Change of Life in Health and Disease.* By EDWARD JOHN TILT, M.D., etc., etc. Third Edition. London: John Churchill and Sons: 1870.

DR TILT is well known as a gynæcological author, and so is his especial work on the change of life. The great abilities of Dr Tilt, his extensive knowledge, his literary power, are well shown in this book; but we must seek for other merits in a work of this kind, and we are pleased to say that it has substantial though peculiar merits. It is, however, not a book of the first class. It reminds us more of old than of recent books, bristling as the latter do either with facts or with fancies. Of course we prefer the former kind, full of facts. They are few, but increasing in number. A large proportion of them comes from Germany. Of the latter kind, bristling with fancies—with an ulceration of the uterus fitted in to explain everything, with a clitoridectomy or a coccygectomy, or a new pessary—we have in English a full proportion, we grieve to say. Tilt's work belongs to neither category. It is a learned discursive volume on the subject of which it treats, and contains many sage practical recommendations. It will amply repay perusal; and every chapter of it has this merit, that it raises questions (which the author too often fancies that he settles) which any young gynæcologist may be proud to solve, and for the solution of many of which, we may tell the young gynæcologist, there are already ample materials, not a few of which are to be found in this very work.