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'Bills of Mortality.'

By WALTER CHANNING, JR. M.D.

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BILLS of mortality are of pretty recent date in this place. About sixteen years ago it was provided, that, after permission for burial, or before, as the case might be, returns should be made by the undertakers to the superintendent of burials, of the diseases, ages, and sexes of the deceased. Up to this period, no distinct provision existed here on this subject, and interments were made for the most part, without any notice having been given of the disease which had preceded the death. Notwithstanding the existing regulations, very little useful information is obtained from our bills of mortality. I speak particularly in regard to the diseases which have been the causes of death. They contain little else that may be depended on, than the number of those who may have died within a given time, and the sexes. Something may be learnt of the ages, to be sure, but this is not so precise as it might easily be.

Our bills of mortality are of recent date. This is not to be regretted. Custom has not so far fixed them in their present form that change would be difficult to make. They have excited very little notice; and it is only once a year, when they are made public, that the physician feels called upon to express his regret at their imperfection and general incorrectness, without at all feeling at the same time that it is in any measure his duty to attempt to make them better. I am led to make these remarks from some small attention to the history of Bills of

Mortality in England. It is quite curious to observe how much the character of these Bills has been continued from their first institution down to the present time. It is not, however, that efforts have been wanting to make them better and more useful, that they still remain so very imperfect, or that very able men in the profession have not given their time to this subject.

Bills of mortality were instituted in London in 1592. The plague raged at that time in that city, and it was for the purpose of recording the progress, diffusion, and decline of that ~~malign~~ ^{malady} that they were instituted. With the disappearance of the disease the Bills ceased, but they were kept again in 1603, when the plague re-appeared. It was at this time too, that by an ordinance of King James, weekly bills were established, and have not since been interrupted. 'In 1606 the number of christenings, as well as that of burials, appeared in the returns; and although diseases and casualties were recorded as early as 1604, no public notice was made of either before the year 1629, when another important improvement took place—that of distinguishing between the sexes.* The ages were specified in 1728. Since this time no changes have been made. It would seem from this hasty sketch, that the measures taken for ascertaining the comparative mortality of different years, were sufficient for this end. There was, however, a provision in the institution which has, in a great measure, destroyed its usefulness. This provision regards the persons who are appointed to manage the returns. The following extract from the work just quoted, contains an important item in the history of the London Bills. 'The collating, printing, and publishing these documents, as far as they relate to the metropolis, are placed under the superintendence and jurisdiction of the ancient corporation of parish clerks: [incorporated by letters patent of the 17th Henry III., in 1239, by the style of the 'Fraternity of Saint Nicholas.] a power which, it is hardly necessary to observe, is wholly inadequate to the accomplishment of the medical, political, and moral objects which these bills are calculated to promote. As to the nature of the diseases of which persons die, much error must necessarily arise from the absurd manner in which the investigation is conducted, as the following statement will clearly demonstrate.—The churchwardens of each parish within the bills of mortality, appoint two old women to the office of *Searchers*, who, on hearing the knell of the dead, repair to the sexton of the parish, to learn the name and residence of the deceased. They demand admittance into the

* Vid. *Medical Jurisprudence*. By J. A. Paris, M.D. &c. and J. S. M. Fonblanque, Esq. Barrister at Law. 1 vol. p. 143.

house to examine the body, in order that they may see that there is nothing suspicious about it, and judge of what disease the person died, which they report to the parish clerk. The regular charge for the performance of this office is *fourpence* to each searcher; but if an extra gratuity be tendered, they seldom trouble the domestics with any examination.*

The above is taken from a work of recent date, and of much authority. There can hardly be conceived a more absurd mode of procedure, and yet this method of obtaining what is regarded as important information, has continued in operation from 1603 to this day, and in a country distinguished for its zeal in all good science, and for the adoption of all the best means of valuable information. Even the old names of diseases continue to be employed, and the profession are still treated with such terms as these: *Head mold shot; horse-shoe head; overgrown head; rising of the lights; livergrown; twisting of the guts; chrysoms, (children dying before baptism,) &c. &c.*; a nosological nomenclature in admirable harmony with the knowledge and refinement of those who employ it. Now, it is not that this subject has not attracted the attention of able men, that this abuse still continues. Dr Heberden has written upon it in the Philosophical Transactions; and Dr Burrows, a very competent person to treat it, has recently written a volume upon the subject. In some parts of England, physicians have taken this business into their own hands, and very useful bills have been published by them. Such are those of Chester, by Dr Haygarth; of York, by Dr White; and Dr Price computed his celebrated tables of the probabilities of life from the Northampton bills. The London Bills furnish a very imperfect comparative view of the deaths and births, but, as far as they can be depended upon, it seems pretty certain that the health of that city is very superior to what it was in the seventeenth century. This, in its connections with the increase of population, seems the amount of the information they contain.*

I shall, in the next place, speak of the objects of these Bills, and inquire if they are not of sufficient importance to obtain for them a better interest than they have hitherto excited

* Those who are curious to consult the bills of York, &c. above referred to, and Dr Price's paper, will find them in the following volumes of the Philosophical Transactions:—Volumes 64, p. 67; 65, p. 85; 68, p. 131; 72, p. 35; and Thompson's History of the Royal Society, article Political Arithmetic, p. 539.

See also, for much curious information, Observations on the Increase and Decrease of different Diseases, and particularly of the plague. By William Heberden, M.D. Stowe's London, book 5, p. 448; Morris's Observations on the past growth and present state of the city of London; Jameson on the changes of the human body, 2vo. London, 1812.

amongst us. Among these objects have been enumerated the following:

1. *The causes of many diseases, and their affinity to one another.*
2. *The rise, situation, increase, decrease, and cessation of epidemic and contagious diseases.*
3. *The means of guarding against their extension and effects.*
4. *The comparative healthiness of different countries and places, climates and seasons.*
5. *The influence of particular trades and manufactures on the human constitution.*
6. *The difference of mortality in the sexes, and comparative views of the diseases which have been fatal in each.*
7. *The increase of longevity, and the diseases and seasons which have been most fatal in the aged.*
8. *The increase or diminution of intemperance, as shown by deaths from intemperance.*

These are among the objects contemplated by these bills, and it will be perceived that they relate to very important questions in political economy, medicine, and morals. It is with a view to bring this subject fairly before the profession and the public, that the writer of this paper has been disposed to hazard some remarks on the means of accomplishing these objects, or some of them; and in order to render this attempt more useful, some of the difficulties which belong to the subject will be first pointed out.

The first, and in truth the great obstacle in the way of uniform and correct Bills of Mortality, is the real uncertainty which exists in regard to the true nature or precise species of a disease which has proved fatal. A physician will always form to himself notions more or less precise on every case which comes before him. Particularly will this be the case, in the majority of instances, of diseases which threaten a fatal termination. He must have his mind occupied about something as a cause for the phenomena he is daily observing, and for the removal of which he is employing the multiplied means of his art. No thinking man can proceed for a moment in the management of a case, whose mind is not more or less occupied in the way now stated. But let the patient die, and now let the physician be asked to give a name which shall precisely indicate the character and seat of the disease, as well as embrace the leading phenomena, or contain what the disease has been, and he will at once have a mass of questions to settle, of which he before hardly dreamed. Even suppose that he is enlightened by morbid anatomy, and has attempted to correct his previous views, or to establish them, by what

this may discover, still he may doubt, not what the disease has been, but by what name it will be most correctly designated. This embarrassment has been felt by the best minds in the profession, and it presents itself as a paramount difficulty in any attempt to render these Bills entirely correct. The ordinary method of getting over the difficulty is to make such an approximation to the truth, as is made by selecting some one, and that a leading phenomenon as a guide, and naming the disease from that, or by using a term so very general, that, while it saves the conscience, it leaves the subject to be decided as it may best suit the views of the reader. This difficulty is the great one to our object, and it deserves to be stated very precisely; for it is by doing so we may hope that approximations to correctness will become nearer and nearer. Men are diffident sometimes in proportion as they are uncertain; and it would be much better to leave the name of a disease unsettled, than to make a record which shall mislead.

There is another source of embarrassment and difficulty which it is of much consequence to remove. This is found in the diversity of names employed by physicians for similar diseases. This leads to much embarrassment. One man means by one name more than another, and a second a very different thing. The term *consumption* is an example, and from its commonness is a good one. We find this not unfrequently in the same bill with *phthisis pulmonalis*, with *decay*, with *marasmus*, &c. Now, some physicians always mean tubercular phthisis by this term; others, hectic, from almost whatever cause, and some even when hectic is the effect of suppuration in parts altogether remote and distinct from the viscera.

Death from intemperance, an occurrence by no means rare, is very frequently reported incorrectly from the different terms employed to express it. Thus, some physicians use the terms *delirium tremens* to designate the disease in this case, while others call it *brain fever*. Now, these last will call inflammation of the brain, brain fever, as well as the delirium of drunkards, while others will restrict it to the first disease. In one case which has come to my knowledge from the best authority, *delirium tremens* was returned as the cause of death; but when the officer who received the report remarked casually to the physician who had attended the case, that the deceased had died of intemperance, 'Oh, no,' said the latter, 'I did not mean to say that by my report.' Now, here is a source of confusion and embarrassment which should not occur. Bills of mortality have been said to be intended for a moral, as well as for political and medical purposes; and although they may

have some effect to diminish intemperance when honestly made, this is entirely defeated, if a mistaken delicacy leads us to mis-state an important fact in our returns to the Health Office. These cases should be returned fairly. No embarrassment exists here as to the cause of death. The disease declares itself without confession of party, and the public ought to be informed fully of the disease and of its causes. This, among others, has been referred to a great question of professional morality; how far the physician is bound by any duty to the public to divulge knowledge which he has acquired by his intercourse with the sick. I am not to settle this question. But I will say decidedly, if this disease from intemperance is not to be reported truly, it will be much better for our bills, and the public, that these deaths be reported from *causes unknown*. There is a dishonesty in this, but it is the least which the case allows; the public, if deceived, are not misinformed. One is hardly aware of the confusion which this negligence of language produces. It is not reputable to a profession to allow its public and most permanent records to be thus made. They are not merely useless, but affect and seriously injure some of the most important reasonings which, as a public institution, that profession may be called on to make.

These difficulties do not apply to all cases. Epidemics, for example, furnish an exception. There was, indeed, a period in the history of these mysterious diseases, in which one of their wisest observers and historians acknowledged that on the appearance of what seemed a new epidemic, it was hardly possible not to lose some patients before the disease, or its treatment, were understood. But after these were ascertained, the epidemic was readily recognized in the new cases which occurred. At this day, these diseases are soon recognized at least, however diverse their treatment may be. Ordinary care only need be taken to make reports of them as correct as the case can require. It is in reporting other diseases embarrassments most frequently occur. It is these too which are of most frequent occurrence, and about which it is very desirable that the information given should be correct.

Some circumstances have now been referred to which contribute to diminish the value of our bills of mortality. Others are at hand and deserve to be named. Physicians in this place are, in no measure, responsible for their accuracy. They have, to be sure, been solicited again and again to give to this subject the attention which we all acknowledge it to deserve. The very respectable and zealous city officer, who is at the head of that branch of a well regulated medical police, the duty of

which is to prepare and publish bills of mortality, has made personal and written applications, again and again, to the profession for their assistance. Quite recently a printed card has been addressed, in the form of a request, to each of our physicians, containing very simple and precise directions, in what manner returns should be made to his office. The trouble to each individual would be exceedingly small, were this request literally complied with. Very little attention, however, has been paid to it. Another source of error may be found in the fact that the returns, such as are now made by the undertakers, are not necessarily submitted to any medical man for revision before publication. At least, there is no medical officer, whose official duty it is to correct the nomenclature, or arrange the diseases in the annual reports.

The present Bills, at least those of London, notwithstanding their various sources of error, have been regarded with some interest by various writers. I have before me some remarks on this subject by Dr Heberden, a great name in medicine, which deserve attention. Dr Heberden says, 'People have fallen into two opposite errors concerning the Bills of Mortality; some have considered their authority as too vague to be made the foundation of any certain conclusions; and others have built upon this foundation, without sufficiently considering its real defects. Both parties are equally wrong. The agreement of the bills with each other does alone carry with it a strong proof that the numbers under the several articles are by no means set down at random, but must be taken from the uniform operation of some permanent cause. While the gradual changes they exhibit, in particular diseases, correspond to the alterations which in time are known to take place in the channels through which the great stream of mortality is constantly flowing. That there are, however, many, and very great imperfections in these bills, cannot be doubted,* &c.

If the above be regarded as a defence of the London bills, we could hardly recommend them for imitation; Dr Heberden acknowledges they have great imperfections, and the main argument he advances in their support is their agreement with each other. Now this coincidence might be explained upon very different grounds from an actual correspondence among the facts, of which these bills are designed to contain and preserve a record.

The most difficult task remains. It would be an useless la-

* Observations on the increase and decrease of different diseases, and particularly of the plague. London, 1801.

bour to point out the imperfections of a system, with some of their causes, without proposing something to diminish or remove them. In the present case, it would seem of primary importance to secure for the subject the careful attention of those, who, if not most interested in it, are certainly the best fitted to attend to it. The materials for these bills must be obtained from physicians. Their whole management, therefore, should devolve on them. And as a primary question, it may be asked, how this may be made a duty upon terms which shall be the most easy, and still secure to it a sufficient responsibility. In some of our cities, (in one at least) I have understood it is made the duty of the attending physician to leave at the house of the deceased a paper, containing the name of the disease, and signed by his own name; or, in case of this being neglected, one of the undertaker's first duties, upon being summoned to the house, is to call upon the physician, and to procure this statement from him. This is required before permission can be obtained for burial. This is certainly not a very difficult duty, and if the physician has any distinct notions of the benefit of these Bills to the community, all the responsibility is secured to it that can be asked. We are met here with the first difficulty above enumerated in the way of giving a name to the disease, viz. the uncertainty which may exist as to what it truly was. In this case the physician is fully authorized to give a name derived from some leading symptom; a symptom which was early noticed, and which has continued most prominent during the progress of the complaint. It will not unfrequently happen, that in a serious malady, particularly if it have become chronic, that the earliest symptoms, though depending on a peculiar cause, were not its appropriate and ordinary phenomena, and an important mistake in the diagnosis will have been committed. But even here we shall have, in the course of the disease, some predominant, or, at least, peculiar symptom for which a name may be given, which will sufficiently well indicate the disease. Where, however, it is altogether a matter of uncertainty, and an examination of the body is not allowed, or, being made, it furnishes nothing satisfactory, it is infinitely better to leave the cause of death, or the disease without a name in the Bills, than to make a report which has no better authority for itself than an obscure guess. It is no matter how large a number of deaths are reported from *causes or diseases unknown*, if no useful knowledge has been obtained concerning them. A physician need not fear for his reputation from such a procedure, if he has been diligent in the use of all the means of knowledge which the case has presented. He will, at least,

have a popular prejudice on his side, and a fair statement of his doubts, where such exist, will give new and better authority to what he confidently records.

The variety of names used by different physicians for the same disease, was mentioned as a second cause of confusion and incorrectness in bills of mortality as now made up. This can be obviated in one way, and this a very simple one. Let the physicians of a place agree to use any one system of nosology, and the nomenclature of these bills necessarily becomes uniform. There may be errors indeed, but one great source of embarrassment will be removed. The profession have pretty lately been presented with a system of nosology, which seems destined to take the place of those which have preceded it. I refer to that of Dr Good. This is getting more and more in use amongst us. It is adopted by the Professor on the Theory and Practice in the University; and there is good reason to believe, that it will in time be generally used. It has many recommendations. Its classification is a strictly natural one; and if it be not a perfect system, which, indeed, it does not profess to be, it has fewer imperfections than those which preceded it. It is the basis of the greater work, the Study of Medicine, and this fact in its history will ensure it a careful study. An objection may be brought to this system, on account of the new terms introduced by the author in the place of older ones. This is no valid objection, if the new ones are better. There is one fact which renders this probable; the high literary attainments of Dr Good. Perhaps no physician has brought to his favourite study so much profound learning; and learning of the very character to furnish the best assistance in the formation of scientific language, a philosophical and technical nomenclature. In order that this system should get into extensive use, I know of no better method, than that some one perfectly acquainted with it should give a few gratuitous lectures upon it. This has been already proposed, I have been informed, to one perfectly qualified for this task, and it is to be seriously wished that he will be induced to give this important instruction.

Our Bills of Mortality are published annually. Suppose returns to be regularly made at the Health Office, and that they are made by the physicians of the deceased, and signed by them; it certainly would not be a difficult task for some one physician, if attached to that office, and for such purpose, to prepare them for publication. Would it impose too great a task on the physician to the Port to revise these Bills as a part of his official duty? Would it not be well, then, for physicians

to be required to furnish the undertaker, in some way, with the name of the disease which they believe caused death, and that such a certificate should be exhibited before permission be granted for burial? And would it not contribute much to the correctness and utility of our Bills, to have them prepared by a physician appointed for that purpose? These questions are proposed, not from a belief that the methods suggested are all, or the best. The object of this paper is to bring distinctly before the profession an important object, not to supply the defects of the system by which it has been pursued.

Before closing this paper, I would suggest that a slight addition be made to our Bills, particularly if they are not to undergo any radical change. There are two classes of diseases sufficiently distinct from each other, to form independent and very useful divisions; I mean the classes of *acute* and *chronic* diseases. These may be added with very little trouble, and the information thus conveyed would be very interesting to the profession. They would be useful, even if they did no more than indicate the difference of time of diseases. They would of course be far more so, were the real circumstances which make the differences between the two classes strictly regarded.

Case of Pseudo-Tetanus.

By DR MILO L. NORTH.

[Communicated for the New-England Journal of Medicine and Surgery.]

ON the 24th of September 1822, I was called to S. C. Burt, a middle-aged man and a labourer, who was affected in the following manner:—About ten times a minute, his head was drawn spasmodically and suddenly backward, attended with a simultaneous contraction of the thoracic and abdominal muscles. Said he had laboured hard the day previous, and went to bed as usual, with the exception of considerable pain in his foot from a stone bruise. This had been freely opened in the morning of the 24th, by Dr Hyde, of this town, but without any discharge of pus. The pain which was severe, was somewhat relieved, but the spasmodic affection of the neck continued. I saw him about 4 o'clock, P.M. in the absence of Dr H. He was sitting. Said he felt no pain nor permanent contraction in the muscles of the neck. Pulse and tongue natural. No apparent disease of the alimentary canal.

Between 4 and 9 o'clock, about 40 grains of the pulv. ipeca-