SOME REMARKS ON THE CLASSIFICATION AND NOMENCLATURE OF DISEASES.

By A. RABAGLIATI, M.A., M.D.,

Surgeon to the Bradford Infirmary.

MY reason for writing on this subject—a very wide one—is, that it seems to be in rather a confused state.

1. A good classification ought to be, if possible, on a thorough-going plan or principle. The official Classification of Diseases, drawn up by a joint committee of the Royal College of Physicians of London, and adopted by the Registrar-General, "is based upon anatomical considerations". As a subservient division to this, we have the division into general and local. The impossibility of working out a classification on such a basis becomes apparent when we examine the classification, and find syphilis, *e.g.*, among the general diseases, and then find under local diseases those of the tongue, and among them syphilis. Again, an instance out of many, where the official classification fails to proceed on a thorough-going plan, is afforded by the arrangement of diseases of the respiratory system, where, under that heading, we find grinders' asthma and miners' asthma—a division which invokes etiology as an aid to the basis of anatomical considerations on which the classification is founded. Not only is this the case, indeed: the official classification actually founds in this case on a quite accidental, or non-essential, circumstance—namely, whether the patient is a miner or (steel) grinder,—and lays no stress on the dust which is equally the cause in both cases; although in one case it is given off by coals, and in the other by steel; and although this dust is also the cause of other asthmas not named—*e.g.*, stone-hewers',—which yet have no place in the classification. I would throw out here a question to which we shall recur at a future time—namely, is, or ought, asthma to be considered a disease at all? What, in fact, constitutes a true genus of disease?

2. A good classification should contain no cross divisions. The official classification, nevertheless, which confines the name "ophthalmia" to affections of the conjunctiva—a proposal, by-the-way, which oculists often treat with great contempt, by using it also for affections of the cornea,—goes on to divide ophthalmias into pustular, purulent, gonorrhœal, and chronic. This is much as if a man should divide his books into Greek and Latin, octavo and duodecimo; or his children into big, little, dark, and fair. It is as evident that an ophthalmia might be both gonorrhœal and chronic, as that children might be both big and fair. I hope to say something immediately about the terms acute and chronic; but pass on to, say that—

3. A good classification ought to be inclusive—that is, it should include all forms of disease. The official classification by no means fulfils this condition. How poor, for example, is the nomenclature of diseases of special organs, as those of the eye; and cirrhosis of the kidney we look for in vain, either as a name-in-chief or as a synonym. But where the official classification does succeed in naming the known conditions of an organ or part, it is rather by the method of simple enumeration than by a rigid adherence to methodical arrangement.

4. A good classification ought to be natural—that is, it should group together diseases which are allied to one another in their nature. The official classification attempts to do this by bringing together diseases of certain organs. It is, in my opinion, open to serious question whether a more natural division would not be formed if the general condition were named as the primary and more important disease, and the locality considered as a kind of accident, at the most being important enough to indicate the genus. Following out this view, I should, for instance, have preferred to see inflammation, or cirrhosis, or cancer (if the name is to be retained), forming a division, or natural order, and the locality of the disease forming a subdivision or genus. Thus order, inflammation, genus, of kidney, mamma, uterus, would seem to be preferable to naming inflammation of kidney among other affections of the kidney, having no real affinity with them except that they are conditions of the organ.

A good classification is much aided by—if, indeed, it be not an impossibility without—accompanying definitions. There certainly are some definitions given in the official classification; but how deficient these are will be evident, when it is reflected that there is positively no definition offered to us by which we may be able to distinguish a fever from an inflammation; and yet almost every other patient we see suffers from one or other of these affections. The official classification constantly commits the error of naming as diseases, conditions which are merely symptomatic of disease. If this is occasionally justifiable (as, for instance, when we use the term catalepsy, because we do not

know anything about the part affected, or the mode in which it is affected), we get no hint of our ignorance from the classification, while that classification goes on using terms like neuralgia, syncope, paralysis, and even deafness and impaired vision, as names of diseases, when, in fact, they are names of symptoms whose significance can, in the majority of instances, be explained by a knowledge (already possessed by the profession) of the parts affected, and the nature of the cause affecting them.

Time does not allow my criticising other classifications offered for the acceptance of the profession, though in general it may be said that they are characterised by the absence of a comprehensive plan. The division into medical and surgical diseases, generally followed in medical writings, is not made use of by the official classification; and with justice, since, however convenient such a division may be in practical life, it could not be defended in logic. In the rough, the surgeon looks after external diseases, the physician after internal; but it is manifest that bones, ligaments, and joints may be affected by diseases, precisely as the lungs, liver, or kidneys, making the proper allowance for the differences in their structure and functions. Both sets of organs may suffer from inflammation, from injury, from deposit of pathological matter; both may suppurate, may ulcerate, may necrose, and, in short, be affected generally in similar ways. Whatever convenience, therefore, may attach to the division which obtains between these two sets of disorders in practical life, such a division is of no use from a classification point of view, and must be thrown aside at once.

Another division, of which we hear a good deal in practical medicine, is that said to have been introduced by Asclepiades of Bithynia, into acute and chronic. This division is made use of to some extent in the official classification, but on no thorough-going plan, and, I regret to say, without any attempt to define the meaning of the terms. I have already referred to *chronic* as applied to ophthalmia in the classification. Under "General Diseases", Division B, we find acute rheumatism, gonorrhœal rheumatism, synovial rheumatism, muscular rheumatism, and chronic rheumatism. This might have served as a good instance of cross division, since gonorrhœal rheumatism might be acute in its intensity, and chronic in its duration; and so might the muscular and synovial forms. But what does chronic rheumatism mean? (The term rheumatism, by the way, is one of which a definition is urgently needed.) Is it rheumatism of the ligamentous, or of the fibrous, or of the osseous tissues? And if so, why not have called it fibrous, or osseous, rheumatism, to distinguish it from the muscular and synovial forms? Is it not clear, however, from this instance, as well as from the use of the term by medical men, that neither the learned compilers of the classification, nor the bulk of the members of the profession, have made up their minds in what sense the terms acute and chronic should be employed; the consequence being that they are used without any system at all, and if correctly, only, so to say, by accident? I have once or twice already suggested certain definite significations in which these words should be employed. First of all, *acute* and *chronic*, although generally opposed to one another, are not logical opposites. Before Asclepiades was thought of, Hippocrates had used the term *ôgys* of diseases which were severe; and he says of them (*Aph. ii, 23*), "they come to a crisis"—or perhaps a better translation of *κρίνεται* in this passage would be "a critical point occurs in fourteen days". In the treatise *περὶ κρίσεων*, however, in a remarkable passage, Hippocrates seems to say that the acute diseases may last from thirty to forty, and even sixty days; "and when they exceed these numbers", he says, "the disease becomes chronic"—*χρονίη ἤδη γίνεται*. Here Hippocrates is not equal to himself, and confounds (as nearly all his successors have done) the intensity of a disease with the length of its duration. In other places, however, there is no confusion. Thus, in *Airs, Waters, and Places*, section 3, he speaks of "ophthalmias which were moist and not severe, but *oligochronic*"—*ὡὶ χαλεπαὶ ὀλιγοχρόνιοι*. Here, then, we actually have a distinction drawn by implication between long-continued diseases (*chronic*), and diseases of short duration (*oligochronic*); or, as the same meaning is expressed by Plato, *brachychronic* (*βραχυχρόνιος*). In *Aph. ii, 37*, Hippocrates uses the term *πῶρος*=Latin *mitis*, for what we call *mild* diseases, or what might be called *proctic*, founding on this term. Galen proposes the twentieth day as the farthest limit of the acute diseases; and he makes, for the sake of method, some further subdivisions. Thus, he says, those diseases are *peracute* which last for seven days, but those which last for four days are *exactly peracute*. When the disease exceeds the seventh day, yet terminates within the twentieth day, he calls it simply *acute*; but it is *exactly acute* when it terminates in fourteen days. Celsus's view is expressed in these words, *Lib. iii, cap. 2*: "Breves acutius sunt qui cito vel hominem tollunt, vel ipsi cito finiuntur; ubi sine intermissione accessiones et dolores graves urgent, acutus morbus est." Chronic diseases are those *sub quibus neque sanitas in propinquo neque exitum*

est, which is certainly a curious definition, since, when chronic disease leads to death (*exitium*) it must cease to be chronic. The views of Asclepiades, who is credited with having introduced the use of the terms (though the opinions of Hippocrates have been too much overlooked by those who have given him this credit) seem to have been almost entirely theoretical. He thought the acute diseases were due to a constriction of the pores, or to an obstruction of them by a superfluity of the atoms; while chronic diseases he thought dependent on a relaxation of the pores, or deficiency of the atoms. Sydenham says, in the *Observationes Medicae*, i, 1: "Morbi quos acutos appellamus velociter scilicet atque cum impetu ad statum moventur;" and he adds, "Isti etiam morbi pro acutis sunt habendi qui, licet respectu paroxysmorum, si omnes simul sumantur, tardius moveant, respectu tamen paroxysmi cujuslibet particularis cito atque etiam *critice* ad finem perveniunt, quales sunt febres intermittentes." Further, as regards chronic diseases, he says: "In his (chronicis) casibus vel tarde admodum ad coctionem pervenit materia vel non omnino," from which we may infer that, in his opinion, the length of its duration was the great feature of the chronic disease. Galen has an interesting passage, in which he discusses the question: What about a disease which begins like an acute disease—that is, severely—but does not come to a termination within the twenty days which he affixes as the limit of the acute disease? Can such a disease become chronic? Here is Galen's answer: "An acute disease exceeding the space of twenty days, without terminating in death, or health, and without changing into any other disease" (the three modes of termination recognised by the ancients), "but running on in the same manner, and almost with the same symptoms, it would seem hard to call such a fever on the twenty-second day long or slow, which, two or three days before, was reckoned among the acute, and still continues the very same disease, only running to a greater extent. In such a case the ancients called them indeed acute fevers, not simply so (*ἐκ μεταπτώσεως ὀξεία*), but extended." These passages show the confusion of thought on this subject among the highest medical authorities, the only one who clearly saw his way out of the confusion at any time being Hippocrates; while even he, as we have seen, fell sometimes into confusion also. It is clear to any one who will give attention to the matter that we have two notions, covered by each of two terms, viz., severity and brevity, as opposed to mildness and length. It would seem to be advisable to separate these two ideas, which are not *ideas only*, since they refer to *facts* in the course of diseases; and what I would propose is the following. Let us retain the term *acute* for disorders which run a severe course. Its opposite, then, would be mild, or praotic (Latin *mitis*, Greek *πᾶος*), a term which is already in use in medical literature; while by the term *subacute*, we may indicate an intermediate group, whose existence is also recognised by the profession. The feature which appears most worthy of study in such diseases is the temperature; and I say this because heat production is the connecting link by which a larger and larger number of vital phenomena are being brought under the domain of the law of the conservation of energy, which is almost certain before long to vindicate its sway over all phenomena whatever. I propose, therefore, to define *acute* diseases as all those in which the temperature reaches any point over 102.5° Fahr. *Subacute*, I propose, should cover conditions in which the temperature is above 100° Fahr., but not above 102.5° Fahr.; while *mild* or *praotic* diseases would be all those in which the temperature, though rising above normal, does not exceed 100° Fahr. These seem to be the conditions to which these terms are at present generally applied, and they are conditions whose existence, at least, is matter of observation. These are, further, all the diseases of elevated temperature, and they are naturally opposed to diseases of diminished temperature—a set of phenomena which do not appear to have received the study they deserve, although numerous incidental references to them exist in current literature. Next, as to the term *chronic*. Properly speaking, this means *long-continued*. The better Greek word would, no doubt, be represented by the English equivalent *polychronic*, but it is well not to interfere with language more than is absolutely necessary; besides which, Hippocrates uses the term *chronic* as we have seen. In Attic Greek* the opposite of polychronic is *brachychronic*. Hippocrates also uses the term *oligo-chronic*, or brief. Letting *chronic*, then, stand as it is, we have its natural opposite in *brachychronic*, or *oligochronic*, of short duration. It will be well to give to these terms as much precision of signification as possible, and I, therefore, propose to define a brachy- or oligo-chronic disease as one which lasts not longer than twenty-eight days, which is the natural length of most (though not all) forms of typhoid fever—at

least, if the period of subnormal temperature is reckoned, as it ought to be. A disease lasting longer than twenty-eight days would, on this definition, be chronic. This seems to be in keeping with observed facts. When typhoid fever, for example, has a course extending over forty days (or longer), as happens from time to time, it usually takes what in common language is called the *chronic* form. On this view it would be *chronic* in duration, while as regards severity it might be *acute*, *subacute*, or *mild*. It generally happens that the latter portion of such a disease is subacute, or even mild, in intensity. Hence no doubt the reason that the division into acute and chronic has held its own for so long a time in medicine, although both terms cover conditions which are entirely dissimilar from one another, but whose dissimilarity is overlooked because of a tolerably constant connection in fact. (I exclude from consideration the meaning of *recurrent*, which the term chronic is sometimes made to cover. Such a use of the term is manifestly erroneous.)

Now that we have stated the meanings in which the terms acute and chronic ought to be used, I would ask, To what does the division amount? Certainly, between the course of a disease such as pneumonia, and the slower course of Bright's disease of the kidneys, there is a wide difference; but when the differences between these diseases are analysed, it will, I think, be manifest that the differences resolve themselves into alterations of intensity on the one hand, and of length on the other. On these differences only a separation of variety or species, or, at the very most, of genus, and certainly not of order, can be predicated. If this is so, as I confess it appears to me, I venture to assert that the so-called reform of Asclepiades did not, at the most, amount to much; while to a great extent it has served to confuse ideas which were, sometimes at least, tolerably clear before his time.*

The definition of disease which it is proposed to adopt in this paper is, that it is any and every departure from health, due to any cause whatever. This in turn implies a definition of health; which, however, cannot be given in any serviceable form, except a more or less descriptive one. In health, let us say, the temperature ought not to be above 99°, nor under 98° Fahr. The respirations should number somewhere between 14 and 20 to the minute; and the pulsations from 60 to 90, and should be soft, rhythmical, and regular. There are other conditions of health of less importance; but these seem to be the main ones, and any variations beyond the limits mentioned we term disease. The first conception that we have of disease is that it is a subkingdom in the kingdom of conditions, the other subkingdom being that of health. After much consideration, it appears to me that the next step towards classifying must be etiological; and for the reason, that it seems impossible to distinguish from one another diseases which are nevertheless distinct, unless we refer to their causes. What difference can be stated, for example, between pneumonia and typhus fever, complicated as it often is by pneumonia, except etiology? A person comes home, shivers, becomes delirious, and, when seen by the doctor, has a temperature of 104°. The temperature changes a degree or two between night and morning, but remains above normal for twelve days or so, during which time there may have been, first dulness, and then crepitation in the chest; the latter now resolving. Supposing it to be a case of typhus fever, we look for rash from the fourth to the seventh day; but there are some cases of typhus where there is no rash, and there are some cases of pneumonia in which we find a mottling or duskiness of the skin. Is there anything in the course of the disorder, in the length of its duration, in the readings of pulse or temperature, which will separate typhus from pneumonia? If not, what is the difference between them, except that one is caused by exposure to cold or damp, and the other by organic matter in a state of change? If this is so, the first division of diseases into orders is determined by the action of inorganic matter on the one hand, and of organic matter on the other. In the former case, we have the inflammations proper; in the other, we have fevers, etc. Inorganic matter may act in virtue of its power to abstract heat; and, when it does so, it causes the inflammations proper. When it acts with momentum, it induces injuries; and when it acts simply as a foreign body—as, for example, when a particle of sand falls upon the eye—it acts as a mechanical irritant. That is, inorganic matter sets up three orders of disease, of inflammation proper, or simple inflammation, injury (traumatic inflammation), and irritations (irritative inflammations).† Classes might be deter-

* In the *Timæus*, 75 B, occurs the following passage: λογισμένους πότερον πολυχρονιώτερον χεῖρον ἢ βραχυχρονιώτερον βελτίον ἀπεργάσαντο γένος.

* To me it appears that specific difference is determined rather by intensity and mildness than by brevity or length. It is a good point for discussion.

† For the inflammations proper—traumatic and irritative—I propose to retain in nomenclature the termination *itis*. This termination has become appropriated to the inflammations, although it is doubtful if Hippocrates employed it in this sense. It is, properly speaking, the termination of a feminine adjective signifying "of or belonging to". Latin, *inflammatio*. In Hippocratic nomenclature, the *καυσταί πυρετοί* included both fevers and inflammations.

mined by the mode of action of the exciting cause; whether, that is, it acts from without or from within.

Those affections we have been considering belong to Class 1, the inorganic exciting causes acting from without. Diseases induced by inorganic matter acting from within would be represented by such cases as one reported from Italy, where a man swallowed a fork, and suffered accordingly; or, for example, when a mulberry calculus sets up inflammation of the bladder. The genus would be determined by the part affected; as, for example, right pneumonia, left pleurisy, enteritis, cerebritis, etc. The species would be determined by facts in the course of the disease; as, for instance, whether the temperature were high or not. Species would, therefore, be acute, subacute or mild, chronic or brachychronic. The variety might be determined by other facts in the course of the disorder; as, for example, the occurrence of suppuration in an inflammation; or soft pulpy degeneration, which we find in inflammations termed strumous. Inorganic poisons would come under the second division of this group. On the plan proposed, the species would very often be determined by the constitution of the individual, and the variety by his diathesis or heredity.*

Diseases caused by organic matter in a state of change depend upon the amount of differentiation or specialised constitution of the acting cause. If the organic matter have the lowest differentiation, it may set up what is called the specific inflammation, *νοσος καταζημιωτική* (if time permitted, *specific* is one of the terms which ought to be defined, since it has been used in several senses), in which the organic matter seems to attack or affect a given part. A good instance of this would be typhoid fever, which I rather look upon as a specific inflammation than as a fever; that is to say, its cause appears to have a lower differentiation—lower a good deal, probably, than that of typhus or small-pox. It may before long be generally thought by the profession that there is no difference between specific inflammations and fevers; but, in the present state of opinion, it seems necessary to give them each a place. When the organic matter has a higher differentiation or specialised constitution, it sets up in the economy fever proper. If it be so highly differentiated as to be an actual germ, the resulting disease is parasitic (*νοσος παραστική*). Finally, pregnancy is the vanishing point between health and disease on this line, in which the most highly specialised germ reproduces the parent. In considering the affections caused by organic matter, we are almost out of the region of conditions, and find ourselves rather in that of entities: a proof, if proof were needed, that the classification is natural, since the aim of the physician who treats diseases due to inorganic matter ought to be the controlling of the resultant inflammation or superactivities; while that of him who has to do with the results of organic matter in a state of change, is both to find an antidote and to control the fever. I have little doubt that, if we could analyse the organic causes of specific inflammations and fevers, and, having analysed, could reproduce them or their analogues, we should soon be on the high road to combat those disorders more effectually than we can now, by some process similar to that which has proved so successful in the case of small-pox. No doubt, when sanitary arrangements are more thoroughly carried out than they are at present—when, in fact, they are perfect—we may hope for the entire disappearance of these affections; but for so long as they exist (all our time, I fear) must our efforts be used in the direction indicated, which will be the more successful the more thorough and exact is our knowledge. With diseases due to organic matter, as with those due to inorganic, classes are determined by the mode of action of the cause, whether it acts from without or from within. The former class contains those diseases we have just been considering; the latter includes such diseases as gout, due to the ingestion of improper food, either as regards quantity or quality, or both. Alcoholism should find a place here. From what has preceded, it will probably have been apparent that I am disposed to classify rheumatism rather among the inflammations than among the fevers. The chalk-stone rheumatic affection, being a disease of nutrition, would, however, probably be classified in the present group.

Diseases caused by anxiety must, I think, be classified by themselves. They are very numerous in times like the present, and must have obtruded themselves on the attention of us all. The genus would be determined by the part affected, as in the inflammations; and the species and variety on the principles already laid down.

What about cancer and scrofulosis and tuberculosis? Where are we to classify them? Time does not allow me to attempt a definition of

malignant—a term used to a limited extent in the official classification. If I were to attempt the task, however, I should say that malignant is a name which includes a vast variety of conditions, some of which, I am certain, yield to proper treatment; while others do not, or at least not to any treatment known. I think, however, that the use of the term malignant very often means reasoning in a circle. First, this ulcer resists treatment; therefore it is malignant; second, this ulcer is malignant; therefore it is of no use to treat it. In the case of what is called cancer, very frequently the course of things is the same as we have seen occur in the inflammations, or in the suborder traumatic inflammations; it originates after a blow. Or it may succeed a long period of worry or nervous depression. That the affection is subacute in its symptoms and long continued in its duration, and that it does not tend to heal, seem to be facts in relation to its species and variety which the principles already laid down enable us to deal with.* But, lest it should be said that this is too revolutionary, let us retain cancer in the nomenclature. The same position I am not disposed to grant to scrofulosis, which is always set up by some slight exciting cause, as cold or damp, overwork, or the irritation of decaying teeth, or some sprain or other injury. The gelatinous degeneration of the resultant inflammatory exudation might, I think, be best classified as the variety of the inflammation whose species is almost always either subacute or mild. Tubercle, perhaps, requires a place by itself, like cancer; or perhaps it is more entitled to its own place.

Scientifically and strictly speaking, it seems to be more than doubtful whether tumour is entitled to a place in a classification. It seems, in fact, not to be a true genus. Tumour originates in one of the ways already considered, either as an injury or as an inflammation, or perhaps occasionally it is the effect of organic matter, and as such can be classified as we have seen. The reaction, after the primary depression, of these conditions is always associated with increased cell-production. This may take the form of fibrinous deposit, or of what is more properly called tumour-growths, viz., an excessive production of normal (or abnormal) tissue. Between fibrinous deposit due to inflammation and tumour-growth, however, there is no difference but one of degree, the processes by which both take place being very similar. An aneurysm is a tumour, yet it is not classified among tumours; an aneurysm would seem to find its place properly among the injuries, when the cause is the force of the blood-current acting against impaired vascular walls. Between defining tumour so widely as to include all tissue-increase (such as inflammatory deposit, aneurysm, and even the swelling at the base of a hard chancre, for instance), and an arbitrary exception of all tissue-deposits except certain named ones, there seems scientifically to be no intermediate course. The former plan would be so wide as to be useless; the latter would be arbitrary and unscientific, and hence tumour would seem scientifically to disappear from our classification. But perhaps it is unwise to insist on this, and it may be for the present better to continue the use of names to which we have been accustomed, and to speak of fibrous, fatty, and other tumours; even although, scientifically, it does seem that tumour-growth is an accident, rather than the essence of the condition of reaction. It is indeed difficult to throw aside names to which we have been accustomed; but I believe that, if anyone carefully turn the matter over, he will conclude that this view is the correct one to take, however unlikely it may seem at first sight.

The *kind* of deposit associated with the state of reaction in certain injuries, and of certain states of constitution in which they occur, is a fair basis for classification, no doubt; and it is here it seems to me that such facts as what are now called cancer and scrofulosis will have to be classified; that is to say, such conditions should be classified as varieties of the depresso-reactive process, termed inflammation, injury, etc., as the case may be.

I have incidentally made several references to nomenclature in the course of these remarks; and, though it cannot be asserted now that the subject is treated in an exhaustive manner (it has, in fact, been only touched upon), I should like, by way of illustration, to make one or two remarks, particularly on the naming of nervous diseases. Perhaps no domain of practical medicine shows so disorderly a set of names, or is so instructive as to the looseness of signification in which even medical men may use names, as the nomenclature of nervous diseases. In the naming of a recent authority, this is as striking as elsewhere, though the authority in question has recast this nomenclature. One

* The terms constitution, diathesis, and heredity might, I think, be fairly applied to three different sets of facts in the history of a human being. Thus, *constitution* might be used to cover all the facts that go to modify him during his extra-uterine life. *Diathesis* might be used of any changes that occurred during the intra-uterine life, as those due to fright on the part of the mother, etc. *Heredity* might be appropriated to facts in the ancestral family history.

* Is not cancer simply a depresso-congestive condition, in which the original depression (corresponding with the collapse of injury) lasts for a very long time, sometimes for years, and the congestive hyperæmic tissue-forming stage also extends over a long period? Does the cancerous structure, when we have it, differ from other structures in any way which can be magnified into a difference of principle, or is it not different from others only in detail? Is not cancer, in fact, very often what may be called chronic injury, with mild symptoms at first, becoming later subacute, or even acute?

ought not to be hypercritical as to his first division of nervous diseases—general diseases, consisting of nervosity, eclampsia, epilepsy, catalepsy, hysteria, etc.—because, with few exceptions (that perhaps of epilepsy and hysteria), the lesions indicated by these names cannot yet be localised. It has seemed to me that hysteria is often excitement or hyperæmia, followed by exhaustion or spanæmia of the pneumogastric centre. But these names should set us thinking, inasmuch as nervosity is no more a disease than rapid breathing. The odd thing is that, though no medical man would dream of being satisfied with a diagnosis of *rapidity of breathing*—or *pneumatosis*, let us suppose its high-sounding title to be—still, hardly any medical man thinks of questioning the propriety of resting quite satisfied if an authority diagnose *nervosity* as the affection from which a patient is suffering! Take, again, the first section of Class IV of nervous diseases, according to the same authority. We have Section 1, *Peripheral Paralysis*, and then follows a list of paralyses of the third nerve, fourth nerve, minor portion of fifth nerve, and so on. This list is gravely offered to the profession, and men are satisfied. Yet is it not the case that “paralysis” is no more a disease than dropsy, and that the mere use of the term opens up a world of unanswered, though not necessarily unanswerable, questions, as to the condition of the paralysed nerve; as, for example, whether it is hyperæmic or spanæmic, or subjected to pressure, or to gouty, rheumatic, or syphilitic deposit, besides many others, which are set aside, it is to be feared, by the mere use of the bad name for the disease. If men would but reflect that the use of a functional name—a name like *paralysis*, derived from alteration of function (lately, to be sure, we have had the name *paresis* re-introduced to our notice) or *neur-algia*—implies a darkening of counsel often without wisdom, and is at best but a stop-gap till the true nature of the condition is discovered, there might be some hope for us, and we might in time arrive at a knowledge, not only of what is the part affected, but also of what is the condition of the part, and what it is that has affected it. But, so long as functional names pass current as names of diseases, the art and science of medicine cannot advance. Chorea, hydrophobia, etc., are examples of names to which these remarks are applicable; and many others will suggest themselves.

One of the merits claimed for the classification whose basis I have thus ventured to lay down is, that no new disease can be discovered whose place is not already theoretically determined by the considerations advanced. In fact, the classification is so complete (theoretically), that no new disease can come on it as a new discovery, so far as its place is concerned in the system of classification; for every possible disease must fall into the subkingdom of disease and class, according as dependent on organic or inorganic causes. Then the genus can be readily discovered when it is determined what is the part affected, while the other characters determine the species, variety, etc. The questions of interest come to be such as these: Is it hyperæmic or spanæmic, if simple; and if specific, or due to organic matter, what is the nature or constitution of the organic matter, and what allied matter will be likely to affect it? Another proof of the value of the classification is, that affections of given organs or systems in the body can be arranged, if acquired, in accordance with its principles.

I will here recapitulate the claims which the classification makes for acceptance: 1. It is on a thorough-going plan, and, therefore, 2. There are no cross-divisions; 3. It is natural, bringing together diseases which are really allied, and not naming mere steps in the process of disease as new diseases; 4. It is inclusive, finding a place for all diseases; and, 5. When a functional name is employed, the question is at once raised, whether we know anything about the condition; which is at least a stimulus to industry and investigation.

BRANDON AND BYSHOTTLES.—Last year, the death-rate in this district was considerably augmented by the mortality from scarlatina, measles, and whooping-cough, which were prevalent in an epidemic form. Measles was responsible for 16 deaths, scarlatina for 29, and whooping-cough for 7, whilst diarrhoea claimed 22 victims; the excessive mortality from the latter disease is attributed, in the main, to improper and insufficient feeding, and to atmospheric changes. Many of the deaths occurred in the third quarter of the year; and Mr. Blackett states: “During this time, we had a condition of atmosphere, as regards warmth and moisture, which not only favoured the decomposition and putrefaction of the articles of food, but depressed the vital powers, poisoned the blood, and doubtless contributed to the mortality from diarrhoea and the other prevalent diseases of the district.” The sanitary condition of the district was well looked after, and many improvements were made; but this part of the work suffers in consequence of the absence of any satisfactory record of the proceedings of the sanitary inspector.

TEN YEARS' SURGERY IN THE KILMARNOCK INFIRMARY.*

By JOHN C. M'VAIL, M.D.

ON March 12th, 1880, I read before the Glasgow Medico-Chirurgical Society a paper entitled “Results of Surgical Treatment without Antiseptics in the Kilmarnock Infirmary”. The publication of this paper in the BRITISH MEDICAL JOURNAL led to questions by letter from several well-known surgeons as to the method of treatment pursued.

I propose on the present occasion both to answer these queries and to state the results of a more extended inquiry recently made into the statistics of the hospital in question. The former paper covered only three years' practice; while, for the present one, I have examined the books from November 1869 till July 1880, a period of 10 $\frac{2}{3}$ years; or, practically, since the opening of the institution, as, in the previous thirteen months, only a few chronic cases were treated. To those who read my former paper, I have to apologise for a certain amount of unavoidable repetition in this one. The chief reason for enlarging to ten years the time of which the paper treats, is the obvious one that ten years' work is of more value than three years'. A minor reason is, that in a leading article, supposed to be a summing up of the discussion on antiseptic surgery, of which my paper formed a part, the BRITISH MEDICAL JOURNAL entirely passed over the facts I had brought forward.

I shall begin by stating such facts regarding the hospital and its patients as have a bearing on the death-rate; and, secondly, give a very short account of the treatment; after which, I shall state the results of treatment, and compare them with those of antiseptic surgery.

The Kilmarnock Infirmary is the central hospital of a busy manufacturing and mining district. It overlooks, on one side, the poorest and most thickly populated part of a town of 25,000 inhabitants. The class of patients is such as might be looked for in the circumstances. The occupations comprise mining, iron-working, cloth-working, and ordinary trades. That the district is not a rural or agricultural one, is indicated by the fact that the proportion of primary major amputations to all major amputations was in the Edinburgh Royal Infirmary 20 per cent.,† and in the Kilmarnock Infirmary 34 per cent. As to the general healthiness of the locality, I may state that the death-rate of Kilmarnock during the past five years has been higher than that of either Edinburgh or Glasgow. The hospital can contain 120 beds, and is divided into fever, medical, and surgical wards, the last being on the ground-flat, and containing from six to ten beds each. Till 1874, the Infirmary consisted of only fifty beds, but had then to be enlarged, owing to overcrowding. Another point in regard to the hospital is, as to how the prevalence of hospital diseases is affected by the fact that the Kilmarnock Infirmary is less than a third of the size of either the Glasgow or Edinburgh Royal Infirmaries, these being the institutions whose statistics I shall use for purposes of comparison. Other things being equal, one would say that the larger a hospital, the more liable was it to pyæmia, etc. But the claims of antiseptic surgery are so great, as entirely to obviate—nay, more than obviate—the differences on this point. For Mr. Lister says: “...the effect of strict antiseptic treatment by three surgeons, and non-antiseptic by the fourth, is simply to convert a large hospital into a small one with reference to the question of hospital disease”. Now this is very nearly the case in the Glasgow Royal Infirmary. If, therefore, the wards of the non-antiseptic surgeon are so much benefited by neighbouring Listerites, as to be practically equal to the Kilmarnock Infirmary, the wards of these antiseptic surgeons themselves must be in a much better position, and therefore superior in this respect to those of a small hospital, where antiseptic treatment is unknown.

Treatment.—Under this heading, I shall first describe very shortly the treatment of an amputation-wound—e.g., an amputation of the thigh. The ordinary flap-operation is performed, a screw-tourniquet being used to prevent hæmorrhage. No water or other liquid is applied to the surface; but, while vessels are being ligatured, blood is mopped off by cloth rags. Old shirting is preferred for this purpose, on account of frequent washing having rendered it almost clear of fibres, etc., likely to adhere to the wound. Sponges are not applied. Silk ligatures are used, and in considerable numbers. After all appreciable vessels have been tied, the flaps are kept open until bleeding has entirely ceased, and the whole surface has assumed a glazed appear-

* Being a paper read at the Cambridge Meeting of the British Medical Association.

† In five years and three-quarters, Mr. Lister performed 80 major amputations, of which 16, or 20 per cent., were primary.