sary, be performed. Any neglect of these cautions involves the danger of considerable proliferation of the capsular cells annihilating the result, or of the supervention of exudative iritis and cystitis, accompanied with an increase of intraocular pressure (traumatic glaucoma).

[To be concluded.]

ON POSITIVE NOSOLOGY.*

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In apology for volunteering in such a forlorn hope as classification, the acknowledged need is pleaded; the example of all authors of works on medicine; and the desire that the result of twenty years' teaching might now be subjected to general criticism.

Cullen's nosology was rather a symptomatology, and has been honourably superseded. Reynolds aims at a therapeutics, for "medicine does not belong to the hierarchy of the sciences: it is the application of all." Aitken proposed an etiology or hygiology, though "the time has not yet come for a classification on a basis so comprehensive." The more humble aim to abide by the facts of morbid anatomy and morbid physiology, without any theory, appears to be at once practicable. The phenomena presented by the "sick", or, as it is imitatively expressed in the Greek Testament, by "all that are in a bad way," belong to all the sciences. Let them, then, be arranged in order, from the simplest to the most complex, and we have a positive pathological nosology.

The present attempt is limited to the first of three divisions—General, Special, and Specific. Special diseases will include all mechanical and physical phenomena, which are surgical; and as for the rest, they are but illustrations of general diseases. Specific diseases are presumptively synonymous with morbid poisons.

It is proposed, therefore, to name, arrange, and define General Diseases.

The body is built up from certain proximate principles, through cell-growth, into various tissues and organs: this is *Genesis*. These tissues and organs are being continually taken down, and appear in various forms in the excretions: this is *Metamorphosis*. But, whilst they exist, there are associated (correlated) with them many various, and some most exalted, properties or functions: this is *Dynamis*.

Things may go wrong at any stage and in any way; and, when they do, the wrongs may be placed, accordingly, in one or other of three classes: Diseases of *Genesis*, or *Growth*; Diseases of *Metamorphosis*, or *Decay*; and Diseases of *Dynamis*, or *Maturity*.

CLASS I. *Diseases of Genesis*. There are three well-marked subclasses: Diseases of *Genesis Proper*, of *Cytogenesis*, and of *Epigenesis*.

1. *Diseases of Genesis Proper* include all which may be known by excess or defect of the proximate principles. These may be arranged in six corresponding orders, bearing the common termination indicative of a push one way or another: thus—1. *Albuminosis*; 2. *Fibrinosis*; 3. *Liposis*; 4. *Glucosis*; 5. *Halosis*; and 6. *Hydrosis*.

Order 1. *Albuminosis*, it might be pleaded at length, may well be adopted as the pathological term for the old and equally accurate symptomological

term *Scrofula*. The cheesy matter found in glands, connective tissue, and internal organs, cannot well be confounded with the translucent changes of tissue in albuminoid degeneration. Bacony liver has been found by Dr. Lionel Beale to be albuminous; and waxy and lardaceous livers have been pronounced the same by Drs. Gairdner and Wilks. Why, then, should we depart from Portal's albuminous obstruction and Budd's *scrofula*? *Scrofula* may thus be retained as one of the most precise terms, instead of being rejected as figurative and vague. *Scrofula* is albuminosis; and albuminosis is a disease of growth, characterised by an excess of curd-like cheesy matter.

Order II. *Fibrinosis*, or more strictly *Hyperinosis*, might be made to give equal definition to *Inflammation*—a word as much in public as ever, notwithstanding Andral and Magendie's sentence of banishment. Indeed, as a symptom, inflammation—a fire—is the most perfect possible term. Aitken does not mention fibrine in his twenty-six lines of so-called definition; but in the text he affirms that fibrine and mucin are the only true inflammatory exudations. Now mucin contains cells, and is therefore more complex; so let the pathology of inflammation be restricted to fibrillation—a state of fibre. Fibrine, as distinguished from Zimmermann's molecular fibrine of metamorphosis, is doubtless genetic, and just one step higher than coagulation. Professor Graham, telling us how fluid colloids most readily pass into a pectous or curdled modification, adds that "the colloid is a dynamical condition of matter, and possesses *energia*, which may be the source of vitality." Ought we not the more to admire the absence of theory in the positivist Job, who three thousand years ago exclaimed, "Hast Thou not poured me out as milk, and curdled me like cheese? Thou hast clothed me with skin and flesh" (the perfected mucin and fibrine), "and hast fenced me with bones and sinews."

Inflammation, or hyperinosis, is this development in a bad way; and the fruit by which it is known is fibrillated albumen.

Order III. *Liposis* may be in excess, as in obesity—hyperliposis; or in defect, as in emaciation—hypoliposis. Fatty degeneration, characterised by oleo-albuminous granules, cannot be confounded with excess or deficiency of adipose tissue. Fatty liver ought not to be confounded with degeneration; neither need oil-casts and cells, with albuminuria, to occasion difficulty.

Order IV. *Glucosis* has been most clearly and practically separated into genetic and metamorphic by Dr. Bence Jones; for his division of diabetes into vegetable and animal expresses exactly the same idea.

Order V. *Halosis* is illustrated by rickets and scurvy, which very probably are diseases of genesis, characterised by a deficiency of the salts of lime and potash respectively.

Order VI. *Hydrosis*, or Dropsy, may in some cases be viewed as an error in aqueous nutrition. In active sthenic cases, for example, the water comes from the blood. In fevers, the water may be metamorphic, and come from the tissues.

2. *Diseases of Cytogenesis* include three orders—*Hæmotosis*, *Leucocytosis*, and *Pyosis*. They may be enumerated continuously, as Orders VII, VIII, and IX.

Order VII. *Hæmotosis* in excess is Polyhæmia; and, when deficient, it is more correctly named Oligæmia than Anæmia. Hæmorrhage is an *aberratio loci*.

Order VIII. *Leucocytosis* is intravascular. Is it not a disease of growth, just one stage in advance of

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scrofula? If so, the etiological treatment will be the same.

Order ix. Pyosis is extravascular. "Cold abscesses", like white cell-blood, may have had no antecedent inflammation.

It is almost unnecessary to add, that Polyhæmia, Leucocytosis, and Pyosis, are diseases of cell-growth, characterised respectively by blood-discs, by white cells within and by white cells without the blood-vessels.

3. The subclass of *Diseases of Epigenesis* or *Morphosis* contains three orders—Trophosis, Tuberculosis, and Tuberosis.

Order x. Trophosis comprises Hypertrophy and Atrophy. In each there is an increase or a diminution of histolytic elements, with symmetry when the disease is general, and with loss of symmetry when the disease is partial.

Order xi. Tuberculosis is equivalent to Miliary Tubercles, as Virchow explains they were understood before the time of Laennec.

Order xii. Tuberosis, or Tumours, may be either simple or complex. In either case we have genera, according to the natural tissues more specially dominant.

Simple tumours are either—1. Fibroid; 2. Epitheloid; 3. Lipoid or Stearoid; 4. Osteoid; or 5. Enchondroid.

Fibroid tumours include many species and varieties; as encysted tumours, hydatids, some polypi, and the so-called neuromatous and sarcomatous tumours.

Complex tumours are cancers. Their complexity consists in an excess of one or more of the natural tissues; the presence of molecular fluid and cells; in tissues out of place as well as out of time; and often also in concurrent degenerations. The genera are: 1. Fibroma (including colloma and myxoma—the mucous of Virchow); 2. Epithelioma (including the villous of Aitken); 3. Lipoma and Stearoma (the *Tissu lardacé* of Müller); 4. Osteoma (the osteoid cancer of Lawrence, and the ossified fibrous or medullary cancers of Paget); and 5. Enchondroma. Scirrhus is fibroma; Encephaloma is softened fibroma; and Colloid is an encysted form of fibroma. Melanoma and Hæmatoma are simply accidental additions of colouring matter and hæmorrhages.

Surely there is nothing "specific" in cancer. In all the diseases now passed in review, the antecedent phenomena, however varied, are equally well known. Each one, up to the most complex, may be viewed as made up of its predecessors; i.e., each simpler disease is a predisposing cause of the more complex. Thus, scrofula is pathogenic of inflammation; so is inflammation of cytogenesis; so cell-growth is of tumours; and so simple tumours are of complex. The method itself suggests the treatment; and tends to decide, *a priori*, the disputed question, whether innocent tumours ever become malignant—a "convenient" doctrine, certainly, and a very true one.

CLASS II. Metamorphosis, as we have seen, is, in fact, contemporaneous with Morphosis. Its diseases are marked by the presence in the excretions of the proximate principles, less and less oxidised; by structural changes in the body, known as degenerations; by the generation of animal poisons; and by various kinds of death. These furnish four orders: 1. Excretive Diseases; 2. Degenerative; 3. Toxic; 4. Mortific.

Order 1. Excretive Diseases are distinguished by nitrogenous principles in the excretions; by non-nitrogenous; and by the different salts. These may be called genera. There may be Azoturia; or Lithiasis, or urate of soda, which is Gout; or Cystine; till we come to albumen. There may be too much carbonic

acid, from the hyperarterialisation of Prout; or there may be oxalates; or lactic acid, which is, at least, one cause of Rheumatism, as experimentally proved by Dr. Richardson. And there may be what are called the Phosphatic, the Sulphatic, and the Chloridic Diatheses; not to mention Hydruria, from Hydramia, to be distinguished from Dropsy.

Diseases of Excretion, characterised thus by the several proximate principles, may all have three origins. They may be due to food, or its mal-assimilation; they may simply indicate vicarious action, when the work of only one set of organs is estimated, as that of the kidneys; or they may be due to veritable wear and tear of the tissues. Therefore, the treatment of individual cases will differ widely. But when, in any instance, we trace the antecedents to special disease or to external causes, it is obvious that the proximate principle in the excretion becomes then a symptom, and ceases to be the basis of classification.

Order ii. Degenerative Diseases may be enumerated as fatty, amylaceous (meaning only the corpora amylacea, properly so-called), and mineral.

Order iii. Toxic Diseases, from poisons formed within the body, include two genera: 1. Septicæmia, generally known as Uræmic Poisoning; and 2. Erysipelas, Dissection Wounds, and Puerperal Fever—which all belong to one species, for they are all capable of mutual propagation.

Order iv. Mortific Diseases furnish four genera: 1. Ulceration, or molecular death; 2. Mortification proper, and Gangrene, or tissue-death; 3. Necremia, or blood-death, with its distinguishing (symptomatic) putrid or adynamic fever; and 4. Somatic Death.

For the third and fourth orders (Toxic and Mortific Diseases), we have a true disinfectant in chlorine, as is almost universally admitted. Only some method of safely and continuously, as well as efficiently, generating it is needed. It is fully expected that, at our next meeting, Mr. Stone will demonstrate that he has been able to supply this need.

For somatic death, all the preceding metamorphic disease predispose, or are proximate causes. They are all modes of dying, or forms in which death may commence. The apparent discrepancies of authors are explained from this point of view. Sir Thomas Watson finds great fault with Bichat's tripod of life; but Bichat speaks of the beginning of death, and Sir Thomas refers to the end, which in all cases is practically one—the cessation of the circulation of arterial blood. Alison's two ultimate modes of dying—a suspension of the circulation in the lungs or in the heart—equally explain that asphyxia, properly so-called, or pulselessness, is the last phenomenon of life. Without theory, the motion of "the blood is the life."

CLASS III. Dynamis, or energy, or force in action, certainly characterises life; and we may speak as freely of the subjective consciousness, and the objective phenomena of our functions and faculties, with as little of theory as when discussing the solids and fluids of the body. They, at least, equally deserve a name, so why should we not keep to the old one of "spirits", or even subdivide them into the properties, or forces, of the body, the soul, and the spirit?

They may be divided into orders, in naming which the commonly received termination *esis* may be used.

Order 1. Myesis, or contractility, is the lowest property, for it is found in some plants,—one of the strongest proofs of Haller's *vis insita*.

The diseases characterised by excessive or defective contractility may be placed in four genera:—1. Chorea; 2. Paralysis Agitans; 3. Catalepsy; and, 4. Tetanus. In chorea, there are twitchings or clonic

spasms of individual muscles. In tremor and paralysis agitans, there are syncronic spasms (Mason Good) of many muscles. Catalepsy is marked by increased tonicity of antagonistic muscles. And tetanus is marked by still greater tonicity of non-antagonistic muscles.

Now in each of these the nutritive condition of the muscle is the predisposing cause; the exciting causes are climatic, reflex, and emotional. Therefore, though the treatment must have respect to the causes, and will vary, still the diseases are diseases of the muscles, not of the nerves. In hysteria, it is true, we may have catalepsy, and strychnine produces tetanus, but then the catalepsy and the tetanus become symptoms only; the diseases have been traced further to neurility (Lewes) and toxicology.

Order II. Diseases of *Kinesis* (Rombert) include convulsions, and epilepsy, with paralysis—hyperkinesis, and akinesis.

Order III. *Æsthesis*, perception, and its two extremes—hyperæsthesia and anæsthesia,—are sometimes distinguished from pain and its loss—algæsis and analgesia.

Order IV. *Pathesis* and *Thelesis* furnish many and important diseases, when abnormally developed. Of these, we have three genera.

1. Hysteria, admitting with Dr. Chambers that the uterus is by no means the invariably exciting cause, may be retained as an old and venerable name, if precision can be given to it. And, though pantomimic of all diseases, may we not briefly define hysteria to be a disease of the emotions and will, characterised by very various propensities and simulations?

2. "Sensational, or Instinctive Insanity," is a disease of the appetites, which control the conduct. The species are,—Bulimia, or "a wolf in the stomach"; Dipsomania, "a thirsty soul"; and Erotomania, excessive amativeness.

3. "Emotional Insanity," improperly called "Moral," is best illustrated by melancholia, or excessive grief. Autophonomania, pyromania, kleptomania, and tarantism, are other species.

Order V. *Phronesis* represents technically the "intellect" of Mr. Bain, and the "cognition" of Dr. Maudsley. "Intellectual or Ideational Insanity" is a disease of phronesis. Mania is its excess; dementia its defect; each being inevitably accompanied by more or less perversion, or loss of control, of the mental faculties (Conolly). Monomania is partial mania. Idiocy and imbecility are congenital varieties of dementia, complete and partial.

Order VI. *Syneidesis*, or conscience, the sense of responsibility, is the last and crowning faculty of man. Its loss may be congenital or acquired, but are there any instances of hypersyneidesis? Who shall decide when on points of conscience most men think others mad. The definitions of insanity, given in two of our latest text-books, place us in as awkward a dilemma as could any preacher. If we maintain our sanity it must be by pleading guilty at the bar of conscience, for, says Dr. Tanner, sanity "enables a man to discharge his duties," which we do not. But insanity, Dr. Aitken says, "renders us irresponsible." Then we may escape, but it must be on the ground of insanity.

Truly we are all morally insane, in this strictest sense, but it does not touch the ordinarily received forms, though it is the ripest fruit of all. Moral insanity, or depravity, is the most complex of all phenomena. It has moral and physical predispositions, and moral and physical exciting causes. It is the cancer of the forces, as cancer is the insanity of the tissues.

ON THE DIAGNOSIS BETWEEN HERNIA AND ENLARGED INGUINAL LYMPHATIC GLANDS.

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At the recent meeting of the South-Eastern Branch of the Association, two very interesting cases were related by Dr. Bowles of Folkestone, illustrative of the difficulties which may arise in diagnosing hernia, by reason of the presence of enlarged lymphatic glands in the groin. In the last of these, the patient had worn a truss for several years owing to a swelling as large as a small orange in the inguinal region, which consisted of enlarged glands caused by gangrene of the toe, no hernia ever having existed. I am able to "cap" this case of Dr. Bowles by another of a like kind, in which, however, the result unfortunately proved fatal. The case occurred in St. George's Hospital, and the patient died on the day after admission. It was as follows:

William A., aged 80, was admitted October 5th, 1846. He stated that for ten years he had worn a truss over a tumour occupying the right inguinal region; that, three days before admission, this tumour enlarged, and became red and painful, and that pain in the abdomen and occasional vomiting had shortly come on. No relief from the bowels had been obtained since the symptoms began. When admitted, his expression was anxious and his pulse weak, and there was a tumour, about three inches in length, in the usual situation of an inguinal hernia. An incision was made in the long axis of the tumour (in order to ascertain its nature), which was found to consist entirely of enlarged and suppurating inguinal glands. During the night, the sickness returned, the patient became much worse, and he died at 11 A.M. on the next morning.

On post mortem examination, the lungs were found to be much congested and the heart flabby, and extensive granular disease of the kidneys was met with. The spleen was soft, and adherent to the abdominal parietes. The peritoneum and intestines were quite healthy. The enlarged glands were found to contain deposits of pus. The other parts of the body were healthy.

In this case, it is a matter of interest to inquire what was the cause of death. Into this question, however, I do not propose to enter, merely stating that I feel a difficulty in determining the point. The previous history was at the time acknowledged to be very imperfect; and to what extent pyæmia may have acted in producing the fatal issue (suffering as the patient was from granular disease of the kidney), I will not venture to affirm. I merely quote the case as proving how one may be misguided as to the nature of inguinal hernia, and as showing for how long a time a patient may wear a truss for such a tumour which is not a hernia, and what may be the injurious results of such a procedure.

THE NIGHTINGALE FUND. The abstract of accounts accompanying the report of this valuable fund for the support of a school for hospital nurses at St. Thomas's Hospital, and another for midwifery nurses at King's College Hospital, shows that the receipts for eighteen months, from June 24th, 1865, to December 25th, 1866, were £3068 : 0 : 6, and that a balance of £275 : 10 : 7 remained in the hands of the treasurer.