

A lecture introductory to the course on the principles and practice of medicine, delivered at the Aldersgate Street School of Medicine, 1839-40; to which is appended a syllabus of the course / by Robert Willis.

Contributors

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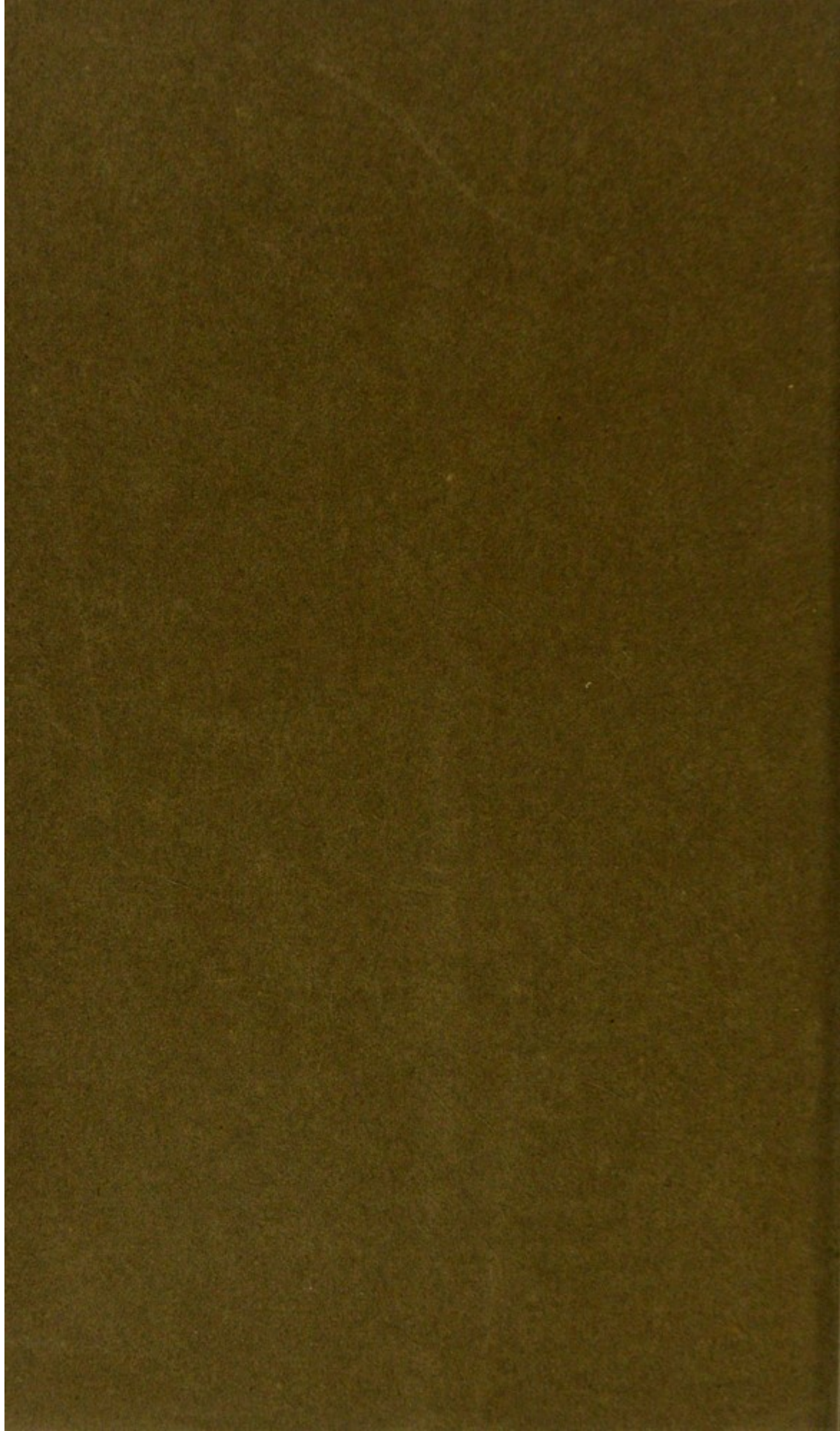


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Willis's

Introduction

Lesson



LECTURE,

&c., &c.

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A
LECTURE
INTRODUCTORY TO THE COURSE
ON THE
PRINCIPLES AND PRACTICE
OF
MEDICINE,
DELIVERED AT THE
ALDERSGATE STREET SCHOOL OF MEDICINE,
AT THE COMMENCEMENT OF THE SESSION,
1839—40,

BY
ROBERT WILLIS, M. D.

LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS, AND PHYSICIAN TO THE
ROYAL INFIRMARY FOR CHILDREN.

TO WHICH IS APPENDED A
SYLLABUS OF THE COURSE.

LONDON:

SHERWOOD, GILBERT, AND PIPER, PATERNOSTER ROW,

1839.

1871

THE

REPORT

OF

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TO
JOHN SOPER STREETER, ESQ.

MEMBER OF THE ROYAL COLLEGE OF SURGEONS
IN LONDON, &c.

MY DEAR STREETER,

The occasion of a Lecture delivered by me, now many years ago, was the beginning of our friendship, and it is to your professional skill, and brotherly care of me during more than one or even two years of miserable health that I again feel myself in a condition to appear as a teacher. Allow me, therefore, the natural gratification of presenting you with this Address; and suffer me to seize the opportunity it affords me of bearing witness to the zeal and success with which you devote yourself to your profession, of expressing to you my thanks for all your kindness, and of assuring you how much and how gratefully

I am

Your attached Friend,

R. WILLIS.

DOVER STREET, OCT. 6, 1839.

A

LECTURE,

&c. &c.

GENTLEMEN,

HELPLESS and feeble as man comes into the world, he is nevertheless endowed with powers that may support the body he receives from his parents, possessed of all or the greater number of its wonderful attributes, through the long period of seventy, eighty, ninety, a hundred, and even a greater number of years. This body with its inherent life,—or, if you will, life with its means of manifestation, the body,—has a beginning—by GENERATION; it has also an end—by DEATH; there is a certain term which it cannot exceed; when this has been attained the life escapes, the body dies. Death is therefore a necessary complement to life. Change would even seem to be an essential element in the scheme of nature. The earth we inhabit was once far other than it is at present; it was peopled by tribes, unlike any that now exist, that have long since disappeared from its surface, and only left evidence of their existence in the fossilized remains which lie buried in the strata that compose its crust. There must have been a time when man, the most perfect of living beings, was not; and the time may come when it

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shall seem good to the All-wise and Omnipotent to sweep him from the scene he now calls his, and to substitute some being more excellent, more perfect, in his stead. Like all things else in nature, our bodies are obviously fitted to endure but for a season. They are launched upon the world weak and imperfect; under the fostering care of a kind mother, they increase in stature and in strength; as they approach maturity new powers are evolved that fit them in their turn to become parents; they exist for a while in the full possession of their distinguishing attributes, and then they begin to decay,—the hair whitens, the teeth drop, the muscles shrink, the step loses its elasticity, the mind its vigour, a general torpor overspreads the frame, and finally the life goes out like a lamp when its oil is spent,—the term for which the body was fitted to last has been attained, and this it cannot overpass.

The death of the body in this sense is an event so natural that neither the individual himself nor those about him have ever thought of escaping or averting it; death is then the obvious conclusion to the pilgrimage of life, and occurring under such circumstances has little that is terrible, nothing that is revolting; on the contrary, men have generally agreed in regarding it as a happy and beneficently contrived means of escape from the growing infirmities of existence. It is probably from the habit of viewing death in this way, that medical men have so commonly been charged with a kind of impiety in thinking more lightly of this great event than the generality of mankind. The charge has even been extended, and we have been said to think less of life than others. Gentlemen, our anxieties, our toils, our days and our nights spent in a struggle with all that tends to bring life to a

close gainsay the justice of the charge,—we certainly do not think less of life than other men. Life's opposite we view perhaps less seriously; for our minds are disabused of the superstition that personifies death, of the childish fancy that enshrines the Creator's ordinance of finality within the form of a skeleton and puts a dart into its fleshless hand.

But few, very few of all the millions that are born attain to the natural and extreme term of mortal existence. Life is liable to be cut short at every instant between the moment of conception when it begins, and that at which it necessarily ends; the machine does not always stop because it is worn out in all its parts; some one of these may get out of order, or may break, and then all motion ceases. The great majority of *abortions* that take place, are mere consequences of the death of the embryo; the processes that should have carried it through the term of its intra-uterine existence have failed in some essential particular; it is blighted; and the uterus by its inherent sensibility rebelling against a useless burthen, it is thrown off. The arrangement of parts, again, that fitted the embryo or fœtus to pass through the various stages of its dependent life within the body of the mother, does not suffice for the independent state upon which it enters at birth; and the act of birth thus becomes a cause of death to many. Once born the body is immediately dependent on various circumstances, any one of which failing or being out of the due proportion, may prove a cause of death. The body does not exist merely by virtue of its own inherent actions, but by virtue of these in harmony with the external world, particularly and most obviously with the atmosphere, with temperature, and with those objects of the organic kingdom which are used as food. Depriva-

tion of any of these is followed after an interval longer or shorter in reference to each, by the extinction of life.

Nor is it only access of air and supplies of food in adequate quantity that are required; the air and the food must further be of proper *quality*. The air of certain situations is most prejudicial to life; it may be more moist, it may be more dry than is compatible with the due performance of their office by the lungs; it may be contaminated with other gases, some of which even in very small proportion are highly deleterious; it may be loaded with particles of solid matter, or charged with the viewless elements of contagion, each of these most formidable causes of functional disturbance and of early death. In the same way the quality of the food that is necessary to life is of the last importance. Coarse, and unassimilable and corrupted, it is a constant source of derangement and decay.

A temperature within certain limits, is farther indispensable to continuing life. The young of many animals are born dependent on their parents for the supply of warmth as well as of food that is needful to them. In these latitudes, perhaps the most frequent of all the causes of the disordered actions that lead to the extinction of life is exposure to cold without adequate defences in the shape of clothing against its depressing influence. In the warmer latitudes of the earth, again, excess of temperature produces if possible a greater amount of mischief with reference to the body of man than its deficiency in colder or more temperate lands; against cold and the inclemencies of the sky we have some means of defence, against excessive heat we have none. It is by the combined influence of atmospheric condition and temperature that each

particular clime comes to have its own predominating causes of mortality.

The conditions, moreover, under which we live, require our bodies to be alternately in a state of activity and of repose. A due proportion of exercise and of rest are alike necessary to the continuance of life; inaction and over-exertion, indolence and fatigue therefore prove causes of destruction in a vast variety of forms:—Armies are thinned much less by the weapons of enemies than by the effects of fatigue, exposure to varying temperatures, and scanty supplies often of indifferent food. Man, besides, is a being of mind as well as body; and the acts of the mind,—violent passions, ungratified desires, powerful thoughts and bright imaginings, all tell more or less injuriously on the system at large, and often dig the pit-fall for us in our middle and even in our upland way of life.

Lastly, we are exposed to a thousand casualties by flood and field, that may at any time snatch us from existence. Violent death is even one of the ordinances of nature. There are entire tribes of animals that live at the expense of others less powerful than themselves; and man himself, if he be generally the victor in his contests with the tiger and the shark, is also sometimes the victim. Ever since the world began, too, man has made war upon his fellow, and the madness of arming for our mutual destruction has not yet gone out of fashion; the military is even the peculiar profession of the titled and the great, of the crowned heads and the aristocracy of almost every country in Europe.

There are causes enough, then, that tend to bring life to a close long before the systems of organs with which its manifestations are connected, become unfit for their offices.

But what is this life, which seems thus set singly in opposition to so many causes conspiring to bring it to an end? An entity unknown to us save in connexion with the beings that display its qualities,—a something which is certainly not organization, which even precedes the arrangement of matter so designated and is its cause, under the influence of which the globules of the ovum begin to arrange themselves into forms that by and by appear as the brain and spinal chord, as a pulsating sac with a limpid fluid included within it which becomes the heart, under the influence of which, consequently, all the phenomena displayed by the body during the period of its existence continue to take place; a something which the best and wisest have conceived as an immaterial essence, indestructible save by the will of the Power that gave it being, and calculated for immortality. Reason and the unprejudiced scrutiny of nature, therefore, add their testimony to the assurances of Revelation, that man at his death shall not all perish; that if the body then resolve itself into a handful of earth and a few measures of air, the cause of all its wonderful manifestations may survive unchanged, uninfluenced by decay.

But the causes inimical to existence seldom take effect on a sudden; they are rarely so potent as at once to extinguish life. The processes by which they accomplish this are gradual, and consist in derangements of one or more of the functions essential to vitality; there is therefore time allowed for thought, for the employment of means which from the earliest ages have been eagerly sought after, and in many cases found efficient in averting the threatened catastrophe. HENCE AND IN THIS WAY HAVE ARISEN THE SCIENCE AND THE ART OF MEDICINE: the

derangements induced by causes hostile to life constitute the diseases to which the body of man is subject; and it is the study of the living being labouring under disease, and of the means we possess of removing or remedying this, that is to engage us in the Course of Lectures upon which we now enter.

Our Course is announced as *Lectures on the Theory and Practice of Medicine*; in other words: We are to give an exposition and to show the application of those principles which guide us in knowing, in distinguishing, and in curing diseases. The subject as a whole, I mean as embracing both medicine and surgery, is that for the due understanding of which all your preliminary studies have been undertaken. It is here that all the knowledge which you have acquired as students, that all the knowledge which as practitioners it will be the business of your lives to acquire, finds its application and is turned to use. It is impossible therefore to over-estimate the importance of our Course; and it is for your own sakes and as you would lay your heads each night upon your pillows with a quiet conscience, and for the sake of those,—the husbands, the wives, the fathers, the mothers, the dear friends, who are by and by to entrust their own and each others lives in your hands, that I venture to bespeak your best attention, whilst to the utmost of my ability, and sparing neither the will nor the pains, I endeavour to acquit me of the responsible office I have undertaken as your teacher.

The title of our Course proclaims it naturally divided into two parts, the one theoretical, the other practical. And on the Continent, and in some of the northern schools of this country, these two parts are actually separated, and each made the subject of a distinct series of Lectures. In the metropolitan

schools, on the other hand, it has hitherto been customary to combine the theoretical part, or Doctrines of General Pathology, with their application, the Special Pathology or practice of physic. This I conceive to be in itself the better plan. Abstract discussions make little impression on the mind, and precepts and principles are always felt as tedious to the last degree when separated from their practical application. The sole objection to the system is, that Practical Medicine being in itself a subject of such vast extent, the entire period of one of our sessions hardly suffices to embrace it in all its necessary details; the consequence has been, that in the business of making students acquainted with the names, symptoms, and remedies of the host of ills that flesh is heir to, the General Pathology has been perhaps somewhat neglected. This error, as I conceive it to be, I shall endeavour to avoid, and I trust in a way that will turn to your advantage.

General principles I believe to be essential to the successful cultivation of all science, to none more than to medicine. Man by his nature is made capable of reasoning on the facts he observes, of searching out the causes of the phenomena he witnesses. And it is by these gifts, and their use, that he is what and where we find him,—a being apt to draw general inferences, and at the head of the terrestrial creation; from a certain number of particulars he infers generals, and these then become his guides in new and untried circumstances. General principles are absolutely necessary in medicine: no man can by possibility have observed every particular; in physic we hardly in the course of a lifetime encounter two cases that are precisely alike in every respect; we are called upon every day to deal with new circumstances, with cases

which we have never seen before, with cases which perhaps no man living or who has ever lived has ever seen before. How shall we encounter these? By applying the general principles which we have deduced from an attentive observation of the structure and functions of the living body, first in a state of health, and then in a state of disease, to the particular instance in hand—from what we know, we become furnished with powers to act in circumstances which till the moment of action we had not even imagined.

In spite of this apparently obvious truth, many have been found at all times who have raised their voices against the use of reasoning in medicine; the medical world has even almost from the beginning been divided into two great sects, the one of which admitted of reasoning, whilst the other rejected it, professing to be guided by experience alone. The first of these sects you will find designated in our histories of medicine by the name of *Dogmatists*, the *Rationalists* of modern times; the second by the title of *Empirics*. In the present day we hear less of these distinctions, and indeed the distinction does not now exist to the same extent as formerly; those who insist upon the use of the God-like faculty within them, employ it under the guidance of acknowledged general laws and of experience, and are commonly suffered to have their way.

Nevertheless you will still often find yourselves admonished to *Beware of theory*, of *reasoning*, and recommended to *Stick to practice*, to *experience*;—I say, too, *Beware of theory*, but I add, *that is not based on the known and the universally admitted laws of nature in general, and of the animal economy in particular*; *Stick to practice*, to *experience*; but I add, that experience or empiricism is both a barren and

a devious path unless trodden under the guidance of general principles. The old empirics denied the utility of anatomy and of all the sciences accessory to medicine, and the empirics of the present day go quite as far in secret and in fact, whatever professions they may make in public. *Experientia fallax*, says the father of physic,—Experience alone is a blind and a deceitful guide in medicine. Of this the world at large and you as young men are not aware; but in physic it is exceedingly difficult to attain to the results of experience, which are facts, by reason of the number and variety of circumstances requiring to be considered, of the utter impossibility of always estimating these correctly, of the ease with which we are deceived, and the readiness with which we deceive ourselves, to say nothing of the obstacles to the discrimination of essentials and constants from things accidental and variable.

At the present day it is customary, it is even fashionable to appeal very constantly to nature, to experience, to *facts* in support of the wildest and most visionary hypothetical notions. Test the latest and most truly miserable of all the products of empiricism, Homœopathy, by a reference to the *experience* of its professors, you will find it a perfect system of therapeutics at the least; try its *experience*, its alleged *facts* by the known laws of matter and of vitality, and its absurdity is manifest. Test another of these bastards begotten between the love of the marvellous and empiricism,—Animal magnetism, by the *experience* of its cherishers, and you will find it supported by a vast variety of circumstances that looks like fact; weigh it in the balance with the known and admitted laws by which we live, and move, and have our being, contrast it with the nature and extent of the powers by which

we are brought into relationship with the external world, with the properties of the parts that make up ourselves and of the things beyond us, and the vanity of its pretences becomes at once apparent. It has been well and pithily observed by high authority that there are probably more false facts than false views in physic; and there can be no doubt but that the former are calculated to be more mischievous, and are much less easily avoided than the latter. Men's theoretical views have not always influenced their practice; what they regard as fact, however, always has: how important then that the facts of experience be collected under the guidance of principles derived from a scrutiny of the laws of universal nature! All who have contributed to the advancement of medicine, whether as a science or an art, have been of the sect that admitted reasoning. Hippocrates, Aretæus, Galen, Harvey, Sydenham, Willis, Boerhaave, Cullen, Hunter, Lænnec, all had their theories, were all more or less given to theorize, none of them to a greater extent than that first and brightest ornament of British pathology—John Hunter.

There is no such list of illustrious names on the side of the mere empirics. In the nature of things there could be little of true excellence in a school that held all science—letters, philosophy, anatomy, physiology, pathology, as alike unnecessary, that debarred the use of reasoning, and refused assistance from experiment, that held the study of isolated symptoms and a knowledge of the already known effects of remedial agents as the sum and substance of the healing art, and the only means of making it more perfect. A knowledge of morbid actions, and of the powers possessed by medicine of controlling these, is also regarded by

the rationalists as the object to be accomplished in physic; but these studies are not the only means to this important end. The course of preliminary education enjoined you by your seniors in the profession, might satisfy you of this; a very brief apprenticeship in the management of disease would make you feel that without the general principles which it is the purpose of that education to confer, you were like men in a vessel out of sight of land, without oar or sail to make way, and without star or compass by which to keep a course. You will be required besides, to begin the practice of your profession immediately, by the time you have attained to one or two and twenty years of age. Now, what can a man acquire of mere individualities, *i. e.* of empiricism in a science so vast as medicine in the course of the two or three, or even the five years, during which he is engaged in its study? Nothing, in all likelihood, that will stand him in stead in the very first case he is called to treat on his own responsibility; but in this time he may, with diligence, acquire a perfect knowledge of the general principles that will suffice him amply upon all ordinary and even all extraordinary occasions. God certainly sent us into the world furnished with aptitudes to take a part in its business before we have reached an age when, if our experience be greater, growing infirmities begin to warn us of the propriety of retiring from its toils. I insist so much on these things, gentlemen, that I may impress upon your minds the infinite importance, the indispensable nature, of the studies preliminary to the course upon which we are now entering.

Whilst I urge the necessity of general principles, however, and warn you thus emphatically against the dangers of mere empiricism, do not think that

I undervalue experience, or imagine that I believe a knowledge of general principles to be all in all, and of itself sufficient for your guidance. I hold that theory and practice ought to be inseparable. Mr. Hunter would have done little had he stopped short at the proposal to tie an artery in its course above the sac for the cure of aneurism, in comparison with what he achieved when he performed his brilliant operation. Philosophy and acquirement are only valuable as they are turned to use. Neither must you presume that I have any particular theoretical or speculative opinions of my own to advocate. I feel no disposition, and shall make it my study never to refer you in my views of disease beyond the admitted structure and functions of animal bodies, and the known laws, chemical, mechanical, and vital, under which their various actions are accomplished ; but these I shall keep constantly in view.

I shall even adopt a plan for our Course of a *peculiarly practical* complexion, a plan which of itself seems calculated to preclude every thing like vague and general speculation, but which I conceive is especially fitted to afford opportunity for gradually developing sound principles, first, of General, and then of Special Pathology, as we advance in our subject. It seems to me quite within the reach of possibility to teach the principles of practical medicine on the basis of a physiological arrangement, and not according to any of the systems reared on the grounds of presumed and seeming rather than of real resemblances between diseases, or necessarily hypothetical views of their intimate nature ; systems of which there have been just as many given to the world as there have been writers and speculators on the matter.

The functions of the healthy body arrange themselves naturally, you are aware, into a few orders, each of which is associated with a particular system of organs. The most comprehensive division of the functions and associated systems of organs possessed by man and animals generally, is into two,—One by which the individual is preserved, and One by which the kind is continued. Let us attach diseases in the first place to these two systems as far as we may, upon the acknowledged truth that Disease is nothing superadded to the body, but consists either in alteration or perversion of natural actions, or in states of organs other than normal as regards structure, from which the system at large suffers. We shall then have Diseases of the systems by which the individual is preserved ; and Diseases of the systems by which the kind is continued.

To the first grand division of organs, that by which the individual is preserved, belongs the important system by which materials for the growth and maintenance of the body are prepared—the *Chylopoetic system*, consisting of the intestinal canal, ab ore ad anum, and a number of accessory organs which aid it in the performance of its office—the lips, teeth, tongue, salivary glands and pharynx, the liver, pancreas, and, for want of knowing better where to place it, the spleen. There is a second grand system by which the nutritive juices supplied by the digestive apparatus are distributed to every part of the body—The *Circulating system*, consisting of the heart and its pouch the pericardium, the arteries, veins, and lymphatics, and the accessories to these last, the lymphatic glands.

But the body does not consist of solids only, there is the *Blood*, which has even been held as the representative of vitality, and must be considered as

a system apart from the conduits that contain it. And modern researches have shown that this fluid actually exists, whether as a cause or as a consequence is yet doubtful, in very different states in point of composition in various diseases. These states may be advantageously considered under the general title of *Hæmatopathia*, or altered conditions of the circulating fluid.

There is a third system under the agency of which all the processes distinctive of vitality appear to be more immediately performed, and by means of which the various parts of the body are associated with one another, and the whole is brought into connexion with the external world. This is the *Nervous system*, consisting of the brain, spinal chord, nerves, and organs of sense, and the systems subordinate and accessory to these by which they execute their behests—the muscles, fibrous sheaths, and bones.

The body, however, is only in a constant state of renovation because it is in a constant state of decay; it continues to exist but by force of change; and we require a means by which effete particles, matters that have served some temporary purpose, that are engendered in virtue of the chemico-vital processes that take place within it, or that have been accidentally introduced and are not essential to its constitution, may be evacuated. These ends are accomplished by the *Excernent system*, consisting of the lungs and air-passages in reference to the one of the two grand constituent elements of animal bodies—carbon, of the kidneys and organs subordinate, in reference to the other essential ingredient of our frame—azote, and of the skin, the precise nature of whose essential function is doubtful, but is probably that of eliminating such portions of carbon as

have become combined with oxygen within the body and there formed carbonic acid.

Nothing seems more natural than that the various diseases to which these different natural systems of organs are liable, should be considered in connexion with them one after another; they will, I believe, be found to form as natural a series, in reference to each set of organs, as any that can be devised or pointed out even in the best of the artificial arrangements entitled Methodical Nosologies. The science of medicine, too, is, *must necessarily be*, most positive as regards the diseases of these great systems, so that the study of them appears to be the best introduction, the most proper means of gaining access to the innermost recesses of the temple of medical science. The important doctrines of General Pathology, all bear reference immediately to derangements of these systems, and, taken along with them individually, they lose the character of abstraction, that renders them tedious and rebutting.

But all the diseases to which the human body is obnoxious, are not immediately referable to any one in particular of the great physiological systems of organs that have been enumerated; there are diseases which have not their seat especially in the chylopoetic, or sanguiferous, or nervous or excernent system; diseases in which these all suffer indeed, but as it would seem by sympathy, and as parts of a whole, not in consequence of peculiar derangement in any one of them. Diseases of this description are usually spoken of as general diseases, and may be disposed not only without violence but even naturally into no greater a number of classes than two. The first of these classes would include diseases that arise in the body generally, from the faulty

or impeded function of one or more of the systems by which the individual is preserved, whether induced by spontaneous derangement, by the noxious influence of one or other of the external agencies surrounded by which we live, or by the absorption or inoculation of a specific poison. To this first class would be referred the consideration of Fever and Inflammation, of Hypertrophy and Atrophy, of Induration, Softening, and the various Transformations which the organs of our body undergo, in the abstract. And then such general and positive diseases as Rheumatism and Gout, Scrofula, Scurvy, Chlorosis, Purpura, Pellagra, some forms of Dropsy, and probably Diabetes mellitus. The diseases just enumerated form one group in this class; a second group would include the diseases that arise from the effects of specific poisons, to which would be referred particular forms of Fever,—intermittent, remittent, and continued; farther, Scarlatina, Rubella, Variola, and Syphilis, the effects of cadaveric, mineral and vegetable Poisons, of the Poison of venomous reptiles, of Hydrophobia, and of Glanders. The second class of general diseases would include those which consist in the engenderment of certain new tissues, or I should prefer saying, in the tendency to engender certain new tissues or matters which form no original element in the body;—to this would be referred the morbid processes that take place in Tubercle, in Scirrhus and Cancer, in Fungus hæmatodes and Encephaloid, in Melanosis and in Kirrosis.

The diseases of the second grand division of the organs which constitute man and animals, those, to wit, by which the kind is continued, arrange themselves into two groups, according to the sex. The one, including the diseases of the Testis, Vesiculæ

seminales, Prostate, and Cowper's glands, in the male; the other, the diseases of the Ovaria, Uterus, Vagina, &c., in the female.

By following this arrangement we shall be led in all cases, where it is possible, to refer the groups of symptoms which constitute diseases, to the several organs especially affected, or in which they have their seat; and even to the particular tissues entering into the composition of these organs, the individual implication of which so commonly impresses disease with its distinguishing characters. This course will enable me to give a substantiveness to my discussion of the *ratio symptomatum*, and inquiries into the proximate cause or essence of disease, which is not to be attained when morbid phenomena are treated as abstractions, and is equally considered apt to be missed when diseases are in the order of any methodical nosology. Above all, it will serve as the best guide to the CLINICAL STUDY OF DISEASE, to facilitate which is in fact the grand object to be aimed at in a course of lectures on the theory and practice of medicine. Descriptions in words are poor substitutes for observation by the senses; and all I can pretend to do here is to convey to you that knowledge in abstract which will enable you to understand what you see at the bedside of the patient, and to profit to the utmost by the observations and procedure of your clinical instructors. Lectures on medicine conducted in this spirit, I believe calculated to be of the greatest use to the student, who, without the guidance they afford, would be liable to wander or to be stopped short at every step in his career.

Good books afford another essential aid to the student in the prosecution of his studies. The disposition to dissuade students from consulting books

to any extent was a madness which at one time prevailed even commonly in our metropolitan schools of medicine, and long exerted, as I conceive, a most pernicious influence on the minds and future prospects of the young men who frequented them. I have often wondered by what obliquity of understanding those who have spoken against the usefulness of books in the study of medicine, had arrived at such a conclusion; the rather as some who have done so have been writers, and rather copious writers themselves. What had been the blessings of the art of printing, had types and presses been but ingenious toys, and their products, things merely to be admired, never to be consulted! There is a vast amount of information indispensable to the medical practitioner which is only to be acquired from oral communication or from the diligent perusal of books. When you hear it said, therefore, that there have been great men in our profession who were uneducated and who never consulted books, that is, who were necessarily ignorant, mistrust the tale—

“ Ignorance is the curse of God on man,
Knowledge the wing with which we fly to heaven.”

When you hear it asserted, for instance, that Mr. Hunter was an uneducated man, boldly gainsay the statement. Mr. Hunter was in intimate contact for ten or a dozen years of his student's life with the most learned at once and practical professional man of his country, probably of his age, his brother, Dr. William Hunter, himself an epitome of all the knowledge of anatomy, and physiology, and pathology, both of ancient and modern times. From him Mr. Hunter imbibed the ample stores of information upon all professional subjects with which he started in life, and which he made conducive to results that

have made his name immortal, and mankind through all time to become his debtors—a truly glorious immortality! There is in fact very little of invention in the world. Genius creates nothing; it but combines anew and into other shapes, things and thoughts that already were; it is the incubating spirit that brings life and order out of the lifeless and the scattered; but it must have its materials to work withal, and it is quite certain that without Dr. William Hunter or a substitute, John Hunter never could have been. Mr. Hunter's elementary or classical education indeed had been indifferent; and it is a subject of eternal regret that it was so; had it been excellent he would certainly have been greater, if greater may be, than he is; but great he was in spite of his disadvantages, nowise in consequence of them. Mr. Hunter was besides the hardest student that ever laboured; he loved to hew out the whole path for himself, much of which he might have trodden already smoothed for him; but he by no means neglected books, his collection of which was as large as that usually possessed by professional men. The best read, the best informed men endowed with practical spirits, have always had the greatest influence not only in their day and generation but also on posterity, and my experience would lead me to say that the success of those whose course in life I have noted, had been very nearly in the ratio in which they had been gifted with the spirit of observation and had been fond of reading. And this was to have been expected. Reading is the only means we possess when we have escaped from schools and leading strings of adding to the amount of our general information; and the educated classes of Society though they may be no judges of a man's professional attainments, are quite com-

petent to estimate the extent of his general acquirements ; and weighing him by these and his manners, they finally either receive him into their circle or deny him access to its round.

Cultivate the taste for reading, then, by all means ; seize every moment in which you are not occupied in scrutinizing nature for yourselves, to enlarge the sphere of your knowledge by making yourselves familiar with the observations and thoughts of others. Things and circumstances which you have seen partially, or imperfectly, or amiss, will by converse with books be extended, or completed, or rectified ; things and circumstances which have escaped you altogether will thus be forced upon your notice. The general practitioner of this country who has received a competent elementary education, who has a taste, a fondness for his profession, and who takes the pains by reading in after-life and whilst engaged in the laborious duties of his calling, to hold communion with the minds of others, has the opportunity of becoming, and I believe sometimes does become the best physician in the world.—You will have *the opportunity*, Gentlemen, I feel confident, that I point out to you the certain means of making the most of it.

SYLLABUS
OF A
COURSE OF LECTURES
ON THE
PRINCIPLES AND PRACTICE
OF
MEDICINE,

DELIVERED

BY R. WILLIS, M.D.,

PHYSICIAN TO THE ROYAL INFIRMARY FOR CHILDREN.

INTRODUCTION—GENERAL VIEW OF DISEASE—FORMS—DIVISIONS—
CAUSES—STADIA—TERMINATIONS.

DISEASES OF THE SYSTEMS OF ORGANS BY WHICH THE INDIVIDUAL
IS PRESERVED.

*Diseases of the System by which materials for the growth and nourishment of the body are prepared—*THE CHYLOPOETIC ORGANS.

GENERAL PHENOMENA AND PATHOLOGY.—Hunger and Thirst, and their abuses. Their morbid states; Increase; Diminution; Caprice; Perversion. Nausea and Vomiting; Inflation; Eructation. Alvine excretions—their characters and qualities; Act of defæcation.

Examination of the Chylopoetic Organs through the parietes of the Abdomen, by pressure, percussion, &c.

General indications drawn from the state of the Mouth and its parts. The Halitus or breath.

SPECIAL PATHOLOGY.—THE MOUTH AND ITS PARTS:—Congenital Malformations; Diseases of the lips,—Inflammation and its consequences; Coalition of the lips and gums; Contraction and Obliteration of the oral aperture; Hypertrophy and Tumefaction of the lips; Prolapse of their lining membrane.

THE GUMS:—Simple Inflammation; Sponginess; Fungus; Gangrenous inflammation.

THE TEETH:—Misdentition; Decay; Incrustation.

THE TONGUE:—Inflammation; Hypertrophy; Coalition with neighbouring parts; Fungus and malignant Diseases.

THE FAUCES:—Inflammation—Angina s. Cynanche, C. palatina, C. tonsillaris; Suppuration, enlargement and deranged secretion of the tonsils; C. pharyngea,—simplex, membranacea (Diphtheritis), gangrænosa. Polypus faucium; Degeneration and Ulceration of the Fauces; Dysphagia pharyngea,—from inflammation, spasm, paralysis.

THE LINING MEMBRANE OF THE MOUTH GENERALLY:—Apthous inflammation of, in infants, in the aged.

THE ŒSOPHAGUS:—Inflammation, acute and chronic; Ulceration; Degenerations and new formations; Stricture; Laxity and Pouching; Spasm; Paralysis; Foreign bodies impacted in it.

THE STOMACH:—Inflammation, (Gastritis,) acute and chronic; Ulceration; Perforation; Rupture; Thickening of its coats; Thinning and Softening; Scirrhus, of the cardia, of the pylorus; Hæmatemesis; Dyspepsia; Pyrosis; Gastrodynia.

THE INTESTINES:—Inflammation of the small Intestines: (Enteritis) acute and chronic; Ulceration; Perforation; Spasm and pain (Tormina, Colica simplex, C. pictonum;) Ileus; Intussusception. Inflammation of the Cæcum and Colon; Ulceration; Scirrhus and Contraction. Melæna; Diarrhœa; Cholera simplex, s. anglicana; C. epidemica, s. asiatica; Lienteria; Dysentery; Tympanites; Discharges of oil or fat from the bowels; Gastro-intestinal concretions; Worms.

THE ANUS:—Congenital affections—Imperforation (Atresia;) Inflammation; Scirrhus and Cancer; Spasm of the sphincter ani; Paralysis; Hemorrhoids; Prolapsus ani.

Diseases of the Organs Supplementary to the Process of Digestion.

THE SALIVARY GLANDS:—Inflammation; Degenerations; Obstruction of ducts—Ranula; Fistulæ; Calculi. Affections of the secreting functions—Ptyalismus, or increase; Sialischesis, or suppression.

THE LIVER:—Inflammation (Hepatitis) acute and chronic; Abscess; Enlargement, or hypertrophy; Shrinking, or atrophy; Hardening; Softening; Fatty degenerations; Degeneration in spirit-drinkers; Scirrhus; Encephaloid; Tubercle; Cirrosis; Melanosis; Cysts, or Hydatids and other Parasites. Implication of the secreting function; Increase; Suppression.—Altered conditions of the bile; Biliary Calculi. Affections of the ducts and receptacle,—Obstruction; Icterus, or jaundice as an effect of one or other of the preceding states.

THE PANCREAS:—Inflammation; Enlargement; Hardening, or scirrhus; Obstruction of duct; Calculus.

THE SPLEEN :—Inflammation, acute and chronic ; Abscess ; Degeneration and morbid depositions.

THE MESENTERIC GLANDS :—Inflammation ; Enlargement ; Suppuration ; Scrofulous affection.

THE PERITONÆUM and its appendages, the Omenta and Mesentery :—Inflammation, acute and chronic, and its consequences ; Effusion of coagulable lymph, and matting of the intestines, &c. ; Watery effusion, (Ascites.)

Diseases of the System by which the juices furnished by the Chylopoetic organs are distributed over the body.—**THE SANGUIFEROUS SYSTEM.**

GENERAL PHENOMENA :—Auscultation.—Sounds of the heart ; Impulse, or force ; Rythm ; Extent of surface over which the sounds and impulse are perceived in health. The pulse ; its nature, frequency, and character at different ages.

GENERAL PATHOLOGY :—Alterations of the sounds of the heart, and great arteries ; blowing, rasping, sawing, creaking, humming, and other sounds. Alterations of the force or impulse of the heart :—Diminution (Leipothymia, Syncope, Asphyxia ;) Increase (Palpitation, violent action.) Affections of the rythm,—Diminished and increased frequency ; Irregularity and disharmony in the contractions. Affections of the pulse, and its varieties and characters ; Of the strong and weak, hard and soft, full and small, frequent and slow, oppressed, intermitting, irregular, undulating, splashing, thready, and other varieties of pulse.

SPECIAL PATHOLOGY.—**THE HEART** :—Congenital malformations ; Ectopiæ ; Cyanosis ; Inflammation of its substance (Carditis ;) of its lining membrane (Endocarditis ;) Induration ; Softening ; Abscess ; Ulceration ; Gangrene ; Rupture ; Hypertrophy ; Atrophy ; Dilatation ; Dilatation with hypertrophy. Degenerations of the heart,—fatty, osseous, tubercular, carcinomatous, &c. Induration and transformations of the valves ; Laceration of the valves. Polypous concretions in the cavities of the heart. Nervous affections of the heart—Irritability of heart ; Torpor of the heart ; Syncope cardiaca ; Spasm of the heart (Angina pectoris ;) Abnormal actions of the heart—palpitation, tremor, undulation ; Abnormal sensations—pain, anxiety, anguish.

THE PERICARDIUM :—Inflammation ; Effusions of coagulable lymph ; —of serum (Hydrops pericardii ;)—of blood ; Transformations ; New formations.

THE ARTERIES :—Inflammation of Arteries ; Ossification ; Aneurism ; Unusual throbbing, in the arteries of the neck,—of the abdomen.

THE VEINS :—Inflammation (Phlebitis ;) Phlegmasia dolens ; Dilatation (varix.)

THE LYMPHATICS AND LYMPHATIC GLANDS :—Inflammation, Scrofulous affection, &c.

Diseased states of the circulating fluid considered apart from the containing channels.—HÆMATOPATHIA.

GENERALITIES :—Quantity of the blood, and proportions of its elements according to sex, age, &c. ; Alterations as to quantity—Increase, Hyperæmia, or Plethora ; Deficiency, Anemia ; — as to quality ; Alterations of Specific Gravity ; Temperature ; Property of coagulating. Fibrine,—excess, deficiency ; The buffy coat. Albumen,—excess, deficiency. Hæmatosine, excess, deficiency. Alteration in the salts, oily matter, &c. of the blood.

SPECIAL PATHOLOGY :—State of the blood in different forms of disease ; In Inflammations, Fevers, Scorbutus, Chlorosis, Cholera, &c. ; Foreign matters mingled with it, as in Icterus, Bright's Disease, Diabetes Mellitus, Melanosis, &c., particles and masses of coagulated Fibrine.

Effects of the circulation of unaerated blood ;—Apparent death from hanging, drowning, inhaling irrespirable gases ; from exposure to extreme cold ; from exposure to excessive temperature ; from the effects of lightning ; Asphyxia neonatorum.

Diseases of the System by which the different Parts of the Body are associated, and the whole is brought into relation with the external world.—THE BRAIN AND NERVOUS SYSTEM. THE LOCOMOTIVE SYSTEM.

GENERAL PHENOMENA and PATHOLOGY :—Common sensation and its alterations—Exaltation, Diminution, Perversion ; Pain and its modifications ; Peculiar sensations—Anxiety, Weight, Tightness, Giddiness, &c. The External Senses—Exaltation, Diminution, and Perversion of the Touch, Taste, Smell, Hearing, and Sight. The internal senses or faculties—Exaltation, Diminution, Perversion of these. The Muscular System—Exaltation and Diminution of its powers ; Tremor, Spasm, &c. Expression of the Countenance in Disease.

SPECIAL PATHOLOGY :—THE BRAIN AND SPINAL CORD ; Congenital malformations of the Brain ; Idiocy. Inflammation of the membranes of the Brain and Cord (Meningitis, Arachnitis ;) of the substance of the Brain and Cord (Phrenitis, Myelitis ;) Softening ; Suppuration ; Induration ; Hypertrophy ; Atrophy ; Effusion within and without the ventricles of the Brain, and into the sheath of the Cord (Hydrocephalus, acutus, chronicus, Hydro-rachis ;) Congestion ; Lethargy ; Coma ; Hæmorrhage ; Apoplexy ; Paralysis,—of motion,—of sensation (Anæsthesia ;) Paraplegia ; Convulsions ; Epilepsy ; Hysteria, H. Encephalica (Nervous Apoplexy, False Hydrocephalus,) H. Neuropathica (Ner-

vousness;) Catalepsy; Trance; Chorea; Delirium Tremens; Paralysis Agitans; Tetanus; Hydrophobia. Transformations; New formations, Tumour; Tubercle, &c. Affections of the organs of the particular senses. Derangements of the parts of the brain connected with the Affective and Intellectual Faculties; Hypochondriasis; Delirium; Insanity; Mania; Monomania; Dementia. The NERVES:—Inflammation, Neuralgia, or Tic; Enlargement; Tumour. The MUSCULAR SYSTEM:—Inflammation; Softening; Suppuration; Psoas Abscess; Transformations of the Muscles. The OSSEOUS SYSTEM:—Rachitis.

Diseases of the System, by which the body is freed from effete particles, and matters accidental and non-essential to the organism.—THE LUNGS, THE KIDNEYS, THE SKIN.

1.—THE LUNGS AND AIR-PASSAGES.—The system by which the body is purged of Carbon.

GENERAL PHENOMENA.—Mobility and capacity of the Thorax; Examination by measurement;—by Percussion; Sounds emitted, and their signification—by Auscultation; Sounds and their signification, healthy respiratory murmur; increased murmur, or puerile respiration; diminished and abolished murmur; bronchial respiration; cavernous respiration; mucous respiration; moist bronchial and moist cavernous respiration; moist crepitating respiration; dry sonorous respiration (ronchus); dry sibilant respiration; dry slow crepitating respiration (a grosses bulles, Laen.) &c.; Sounds not immediately dependent on the penetration and exit of the air,—rubbing noises; metallic tinkling; noise of fluctuation.—Dyspnæa, Cough, Sneezing, Sighing, Sobbing.

Affections of the voice: weak or suppressed voice; Aphonia; Hoarseness; high pitch, low pitch of the voice.—Bronchophony; Pectoriloquy; Aegophony.

SPECIAL PATHOLOGY.—Inflammation of the air-passages generally.—Catarrh; Influenza; Laryngitis, and Tracheitis,—simplex, exudativa (Croup); Ulceration and organic alterations of the Larynx and Trachea (Phthisis laryngea); Bronchitis, acute, chronic (Catarrhus pulmonalis); Hooping-cough; Spasmodic cough; Asthma; Catarrhus suffocativus; Dilatation of the air cells; Rupture of the air cells (Emphysema pulmonum). Inflammation of the substance of the Lungs (Pneumonia) and its effects,—Hepatisation, &c. Gangrene. Œdema. Congestion. Hemorrhage (Hæmoptysis, Apoplexia pulmonalis). Tubercular deposition, and its effects (Phthisis pulmonalis). Melanotic or carbonaceous depositions. Inflammation of the membrane covering the Lungs and lining the Thorax (Pleuritis). Effusions of plastic lymph; of fluid (Hydro-thorax;) of air (Pneumo-thorax), of air and

fluid (Pneumo-hydro-thorax). Transformations of the pleura—into cartilage, bone. New Depositions, Tubercule, Melanose, &c. Affections of Thyroid body (Bronchocele) and of the Thymus.

2.—THE KIDNEYS and parts subordinate.—The system by which the body is purged of Azote.

GENERAL PHENOMENA. The URINE in health. Quantity. Proportions of its ingredients. Specific gravity. Alterations in quantity,—increase, diminution. Alteration in quality:—colour,—transparency,—odour,—specific gravity,—acidity;—alkaliescence;—in the different solid ingredients,—uric acid,—phosphatic salts, &c. New and accidental impregnations—lithic oxide; cystic oxide; oxalates; phosphorus; albumen; carbonate of ammonia; blood; bile; oily matter; mucus; pus; sugar. Matters deposited from the urine;—sediments and concretions (gravel); examination and discrimination of these. The KIDNEY: in health; proportions of its parts; its weight. Examination through the parietes of the Abdomen. General indications from the system subordinate to the Kidneys—the Ureters, Bladder, Prostate, Urethra.

SPECIAL PATHOLOGY.—THE KIDNEYS.—Congenital peculiarities—Absence of one Kidney; union of the two Kidneys (Horse-shoe Kidney); displacement.

Wounds and other injuries of the Kidneys—Inflammation, acute and chronic, of the substance of the Kidney (Nephritis); Suppuration; Abscess; Gangrene. Congestion or hyperæmia; Hæmorrhage (Hæmaturia); Hypertrophy; Hardening; Softening. Anæmia; Atrophy or shrinking. Degenerations—granular with secretion of Albuminous Urine;—fatty;—tubercular;—cancerous;—encephaloidal;—cellular. Alterations of the vessels of the Kidneys,—the Arteries;—the Veins. Foreign substances contained in the Kidneys—Calculi of different kinds; Hydatids, and other parasitic inhabitants. Suspension of the secreting functions (Anuria); Increase (Diabetes). Affections of the excreting parts,—Inflammation, acute and chronic, of the Pelvis and Infundibula; Obstruction of the Ureter at its commencement; Distension of the Pelvis; of the whole Kidney (Hydronephrosis); Obstruction of the Ureter near the Bladder,—Distension of the Ureter (Ischuria Ureterica). Alterations of the capsules and parts immediately surrounding the Kidneys (Perinephritis); Renal Fistulæ, &c. Affections of the supra-renal Capsules. Affections of the Bladder (summarily),—Congenital Malformations; Inflammation, acute and chronic Ulceration; Hæmorrhage; Rupture; Catarrhus Vesicæ; Thickening of the Walls; Fungous growths; Cancerous, and other degenerations. Retention and Incontinence of Urine. Irritability of Bladder; Spasm; Paralysis. Foreign bodies in the Bladder (Calculus Vesicæ). Affections of the Urethra (summarily).

3.—THE SKIN.

GENERALITIES.—The Skin in health—its structure—its functions. The Perspiration—increased, generally, locally; watery, clammy, hot and cold sweats; odorous and coloured sweats. Diminished functions. Temperature. Sensibility,—exalted, diminished.

SPECIAL PATHOLOGY.—Inflammation: its different forms. *Exanthemata*: Erysipelas. Erythema, Roseola, Urticaria. *Papulæ*: Strophulus, Lichen, Prurigo. *Bullæ*: Pemphigus, Rupia. *Vesiculæ*: Herpes, Eczema, Scabies, Miliaria. *Pustulæ*: Impetigo (Porrigo, Tinea), Ecthyma, Acne, Sycosis, s. Mentagra. *Furunculi*: Furunculus, Anthrax. *Gangrænæ*: Anthracion, Noma. *Squamæ*: Lepra, Psoriasis, Pityriasis, Ichthyosis. *Tubercula*: Lupus, Elephantiasis græca, Molluscum, Vitiligo, Cancer. *Maculæ*: Ephelis, Chloasma.

Diseases of the appendages of the Skin.—The HAIR-BULBS:—Trichoses; Plica. The NAILS:—Onychia. The SEBACEOUS FOLLICLES: Acne, Rosacea, Sebaceous flux.

Diseases of the subcutaneous cellular tissue; Sclerodermia, or skin-bound; Anasarca.

Diseases that arise in the body generally, from the faulty or impeded functions of one or more of the systems by which the individual is preserved, whether induced by spontaneous derangement, by the influence of any of the external agencies surrounded by which we live, or by the absorption or inoculation of a specific poison.

First Group:—Fever (in the abstract;) Inflammation, Hypertrophy, Atrophy, Induration, Softening, and Transformation, (each in the abstract.) Rheumatism; Gout; Scrofula; Chlorosis; Scurvy; Purpura; Diabetes Mellitus; Dropsy. 2nd Group:—Fever,—intermittent, remittent, continued. Scarlatina; Rubeola; Variola and Vaccinia; Syphilis; Cadaveric poison; Mineral and vegetable poisons; the Poison of venomous reptiles; Hydrophobia; Glanders.

Diseases, the tendency of which is to engender certain new tissues or matters which originally form no element of the body.

Scirrhus and Cancer; Fungus hæmatodes and Encephaloid; Tubercle; Melanosis; Cirrosis; Colloid.

DISEASES OF THE SYSTEMS BY WHICH THE KIND IS CONTINUED.

Diseases of the Testis, Vesiculæ, Prostrate and Cowper's Glands, in the Male.

Diseases of the Ovaria, Uterus, Vagina, &c., in the Female.

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