ORIGINAL COMMUNICATIONS.

ON DISEASE IN GENERAL, AND ON PATHOLOGY IN PARTICULAR.

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DURING the winter of 1849-50 we had, in Reading and its neighbourhood, an epidemic of small-pox, and at the same time scarlatina and measles extensively prevailed. It is not the burthen of my paper to show that there was anything peculiar in the cases of small-pox in themselves, but to mention certain preceding, accompanying, or succeeding appearances, which previously had escaped my observation, if not my notice. The contemplation of these appearances led on, may I say inductively, to a long series of reflections on disease and its causes, and also to a critical examination of the opinions of others on the same subject.

My own opinions, which to some may appear extraordinary, will rather be comprehended in those of others, than obtrusively advanced, and very possibly those opinions of others may be applied in a way somewhat different from what they, the authors, expected in their delivery.

The whole is intended to support, perhaps to demonstrate, the truth of that doctrine which was once believed and taught, and is now beginning to be taught, because known to be true, viz., that of humoral pathology; and to shew, also, that there is a greater unity in diseases, their causes, and their treatment, than is generally suspected.

Without further preface, I will read the short notes of some cases taken during the before-named epidemic of the winter of 1849-50.

Small-pox was very prevalent, attacking many after vaccination; measles were also prevalent, and scarlatina less so.

In Mr. F., 45 years of age, vaccinated, it was impossible to distinguish the rash on the body from measles, and the face only shewed pustules. In Mrs. C., her body was covered with a rash like measles; and she had not half a dozen pustules over her whole body. Miss M.'s man servant, 30 years of age, had the same appearances exactly. Mrs. W.'s child, 2 years of age, had been vaccinated; it took well. The sister-in-law, in the same house, had small-pox severely after vaccination. The child had a rash over the whole body, precisely similar to scarlatina in all its signs and symptoms. The father had small-pox, secondary. The mother had pains in her limbs, head, etc, but no rash. Mrs. A.'s children had measles, and after nursing them, the mother had scarlatina. Two of Mrs. C.'s children had scarlatina, and then measles immediately after. The others had the measles only. One of Mrs. W.'s children had, after vaccination, chicken-pox very severely. When the rash was fully out, I vaccinated the infant. The vaccination took well; but on the fourteenth day, the child was covered with the eruption of chicken pox, with six or eight well marked pustules of small-pox. I vaccinated Mrs. C.'s child, 2 years of age. On the tenth day, it was attacked with measles. I re-vaccinated Mrs. A.'s child, 2 years of age: it took well. On the tenth day, it was attacked with scarlatina.

These occurrences must be familiar to all practitioners. I will adduce, however, a few authorities.

Diemerbroeck says, "On the seventh day, contrary to all expectation, the measles come out over the whole body, between the small-pox." He adds, "I do not remember I ever saw this accident above twice or thrice in all my practice. However, by this observation it appears, that although both these diseases, in respect of infection, have somewhat in common, yet respect of the subject to which that infection adheres, there is something of difference and distinction between them." (*Small-Pox*, p. 39.)

Dr. F. Churchill, in speaking of the remarkable events of small-pox, says, "But what is more remarkable, measles

and scarlatina may occur, either along with small-pox, just previously, or immediately after."

Dr. Empis describes "An epidemic of small-pox, which prevailed in Paris during January 1852, as having been preceded in some cases by an eruption, sometimes resembling measles, sometimes scarlatina. The two eruptions, he believes, are due to the same specific cause." (*London Journal of Medicine*, September 1852.)

When I say scarlatina and measles, I mean eruptions which I could not distinguish from those diseases, either in their access, progress, or decline. I do not deny that there are specific differences, but what I assert is, that they are generically the same.

"With reference to the steps of the progress", says Dr. Jenner, "by which the separation of these three diseases into species was effected, they are the same as those by which typhus fever, typhoid fever, and relapsing fever, have been in recent times separated into species. Nor shall we be surprised at this", he adds, "when we reflect that the circumstances which favour the spontaneous origin, if such be possible, and the circumstances which favour the spread of all are the same."

"The cause of them is the same", says Diemerbroeck, as the cause of small-pox." (p. 23.)

Three diseases, usually termed the exanthemata, are supposed to have originated in the middle of the sixth century, and to have been introduced into Europe by the Saracens; viz., measles, scarlet fever, and small-pox.

As the measles appeared in the same country, and at the same time, with scarlet fever, it is to be presumed that their respective poisons must have had a similar local origin. "The Arabian who first described these diseases considered them merely as varieties of one and the same species." (Williams on *Morbid Poisons*.)

Let us now adduce a few other diseases, and see whether their manifestations are not equally varied and dissimilar.

First, with regard to syphilis; is there any resemblance between the rubecloid efflorescence and the ecchymatous pustules; between diminutive acne and the thick-crusted rupia; between cankering ulceration and painful nodosity; between cranial caries and inguinal bubo? And yet all are the effects of the poison, "which, there is every reason to believe", says Mr. Key, "is ever the same."

"Dissimilar phenomena may arise from the same febrile poison", says Dr. Laycock. Epidemic catarrh may have its origin in the pleuropneumonia of cattle. Puerperal fever may originate in the same quarter. An unmarried girl, 20 years of age, had, while menstruating, been on close attendance on a cow that had died of milk-fever. She died with all the symptoms of puerperal fever. The practitioner was in attendance on two parturient cases at the same time; both died of puerperal fever.

We have discussed more than once in this Society the generic identity of puerperal fever, mania, and convulsions.

Most members will recollect Mr. Jeston's cases. A young woman nursed her father with erysipelas. She was seven months advanced in pregnancy. Two of her children had erysipelas; and, lastly, she was seized. Premature labour came on; puerperal fever supervened, and death occurred in seven days. The nurse who attended this woman was immediately after seized with acute rheumatism and pericarditis, and died in seven days.

"There is an identity in the generic cause of all epidemic diseases", says the *Times* commissioner. "With regard to fever, I believe", says Dr. Graves, "that in this country at least, there is no essential difference between typhus and what is called typhoid fever; the same contagion will produce both forms, and these forms are mutually convertible." "The same exciting cause", says Dr. Stokes, "is capable of producing different kinds of fever in different persons." "Yellow fever has the same origin as intermittent and remittent fever." "Intermittent, remittent, and continued fever, are mere varieties of the same disease. They often run into genuine typhus", says Dr. R. Dundas.

Three men were cleansing out a cesspool. They were all taken out insensible; great constitutional disturbance was

induced in all. The first had severe inflammation of the eye; the second had erysipelas of the calves of the leg; the third had pneumonia of the right lung.

As respects gout, I cannot do better than read to you the Protean summary of the eloquent Dr. Begbie:—

"Gout is blood disease, and may disclose itself in every organ of the body, and complicate and involve every disturbance of the system. It may visit every part and every texture, from the crown of the head to the sole of the foot, and molest and vitiate every function appertaining to life. We discover it in the head, where not unfrequently, in the form of intense and continued headache, its first manifestation in the system is perceived; we trace it in fits of giddiness and in transient affections of sight and hearing; and often we are called to acknowledge its presence in apoplectic and paralytic seizures, and its most intimate association with lethargy and coma, in connexion with serous effusion or other cerebral diseases. We discover it in the spinal sheath, or spinal marrow, in the shape of paraplegia; and in every part of the nervous system in the form of neuralgia, whether under the name of lumbago or sciatica, of hemi-crania or toothache, or any of the numerous forms of tic douloureux. We find it in the ear, and we trace it in the throat. We discover it often in the eye, where, under the name of ophthalmia, or iritis, or scleritis, it lights up intense and alarming inflammation, which not unfrequently terminates in the destruction of vision. It plays a part, a most important part, in many of the most formidable affections of the chest. We detect it, in many instances, in pneumonia, and particularly in pleurisy, and still oftener in bronchitis, and it is the source of many cases of hydrothorax. Gout is the cause of great embarrassment to the heart and bloodvessels, and perhaps, more than any other agent, lays the foundation of irreparable mischief in those vital parts. It is the immediate cause of some acute attacks of endocarditis and pericarditis, and the proximate cause of numerous chronic affections of the heart and arteries. Gout has frequently its seat in the organs of digestion, complicating their functional derangement, hurrying on their structural diseases, and terminating their organic lesions; witness its frequent connexion with disorders of the liver, and its influence on their progress to visceral obstruction and incurable disease. It is intimately connected with the disorders of the urinary organs; is frequently the origin of granular degeneration of the kidneys; of puriform discharge from the urethra in the form of genuine gonorrhœa, and the well known source of stone in the bladder. Gout lurks in many derangements of the uterus, and discovers itself in some of organic diseases. It is the fountain of many hæmorrhages and many fluxes. It is the origin and essence of many cutaneous eruptions, and in the joints the fruitful source of crippling lameness and damaging deformity. Everywhere its ravages are discernible by those who have studied its course,—a course, however, which is too often run unperceived and unsuspected." (*Edinburgh Medical and Surgical Journal*, January 1854.)

Nearly the same may be said of rheumatism. Then we have the connexion of rheumatism with chorea, and erythema nodosum, and the curious sequence of jaundice and urticaria.

GENERAL EFFECTS OF MORBID AGENTS: INFLAMMATION, ETC.

Let us now very briefly trace the effects of morbid agents on the human frame; and, first of all, let us discuss that effect usually termed inflammation.

Inflammation, I take it, consists, in its earliest stage, in a disproportion between the bloodvessels and their contents. This disproportion may be absolute or relative.

Absolute.—1. From contracted vessels, from their fatty state, as in gangræna senilis; the globule being natural. 2. From enlarged globules, from foreign bodies; in impoverished blood; the vessels being natural.

Relative.—Poisoned blood producing irritation, contraction of the vessels, and consequent disproportion; the fertile source of most diseases.

Stagnation of blood is induced by either state.

"The quantity of blood in the vessels of an inflamed part is not the primary fact in the phenomena of inflammation; the determination is induced by impeded flow, from changes in the *quality* of the blood", says Dr. Geo. Johnson. Two methods of treatment are thus clearly indicated. 1. To push on the tardy current; the stimulant plan. 2. The soothing plan; to allay the tumult; to moderate the quantity of blood going to the part; to facilitate that which does go, and to encourage supplementary circulation. A third leading indication of treatment is to cut off the source, or diminish the supply of the poisoned blood, and to expel that already there from the system.

I have nothing to do in this place with the subsequent phenomena of inflammation, the paralysis of the vessels, their consequent dilatation, nor with exudation. I shall have something to say about traumatic inflammation in due time.

Inflammation, then, is caused by the determination to or stagnation in a part of blood more or less vitiated, and consequently unfit for normal nutrition. "Rubor, tremor, dolor, etc., the consequences of a cause in operation elsewhere", says Mr. Gallwey.

We are not yet in a position fully to interpret elective determination. "Each morbid condition of the blood", says Mr. Paget, "is prone both to produce an inflammation in a certain part or tissue, and to give that inflammation a certain form or character."

This determination to a part is an effort of nature to expel certain matters which are disturbing her in her ordinary operations; in short, inflammation, we conclude, is nothing more than an eliminatory process. "I am strongly disposed to view the local complications arising in the course of intermittents and remittents as topical eliminations of the poison, rather than as sthenic determinations of blood to such parts", says Mr. Gallwey.

Admitting these principles to be correct, and advancing in the same path, we are led to the conclusion that local disease is but the expression of a general condition, that there is no such thing (exclusively, of course, of traumatic causes) as primary local disease.

Let us now see what others say on this subject.

"We believe", says the Dublin reviewer, "that the erroneous idea of a local morbid entity, as distinguished from that comprehensive view of the human economy, which considers pathology, wherever manifested, as more or less of a general affection, must give way." "The further we advance in our knowledge of pathology", says Dr. Todd, "the more must we give up ideas of idiopathic inflammation, and the more constantly do we find inflammatory affections to be due to some defect in the excretory functions, or to the introduction of some morbid material."

"How many of these diseases", says Dr. Stokes, "supposed to be idiopathic, are really secondary to an unrecognized morbid state of the entire system."

"It is of the utmost importance", says Dr. Copland, "to look upon diseases not merely as local manifestations, but as the associated exhibitions of a morbid condition diffused throughout the system."

What does the latest and greatest authority say?

"I must confess", says Sir B. Brodie, "that in proportion as I have acquired a more extended experience in my profession, I have found more and more reason to believe that local diseases, in the strict sense of the term, are extremely rare."

Local causes may operate so as to render one organ more liable to disease than another; but everything tends to prove that, in the great majority of cases, there is a morbid condition, either of the circulating fluid or of the nervous system, antecedent to the manifestation of disease in any particular structure. "Moreover, even in those cases in which a disease may be distinctly traced to some kind of mechanical injury, the character which it assumes depends as much on the state of the general health as on the injury itself."

We can now understand why bruised parts, injured structures, new tissues, etc., should be so liable to become

affected with disorder or disease. For example, the opening out of old wounds in scurvy; the deposit of tubercle in false membranes; the liability to a recurrence of inflammation in the same organ; the inflammation of inflammatory deposits; the pains in parts injured many years before, during the prevalence of an east wind, or premonitory to an attack of acute disease, as of gout. An old sportsman, just previously to an outburst of gout, declared to me that he felt pains in every part that had been injured during his lifetime; that they brought vividly to his recollection every tumble that he ever had had, and they were not a few.

Chemists and physiologists have complained of the want of correspondence in the analyses of the blood. If we look at the infinity of the causes changing its character and vitiating its constitution, our surprise should be great if two analyses could be alike. If we bear in mind the revolutions of the blood impelled by age, sex, food, exercise, occupation, nutrition, and excretion, we must recognize it in a state of unceasing change. Is it to be wondered at, then, that the functions of the body should become distracted in their opposing advocacy, and be the fruitful source of all intrinsic disease! "The whole tendency of modern pathological research," says Dr. Carpenter, "has been to show that the human frame, if endowed with an ordinary amount of inherent vigour, is no otherwise incident to disease than as it is in various ways subjected to the agency of causes which produce a departure from the normal play of its functions."

"Pathological actions," says Dr. Wright, "are nothing more than physiological ones out of order."

Let us now just run through the list of diseases, and see how they conform to such an allocation. We will first take the inflammatory diseases, and then the nervous. Beginning with the head, we may have inflammation of the membranes of the brain; but it is tubercular, nephritic, bilious, syphilitic, or epidemic.

"Meningitis rarely if ever a primary disease." (Dr. Druitt.) "Idiopathic inflammation of the membranes, at least, is almost peculiar to the tubercular diathesis." (Dr. Chambers.) "A cerebro-spinal arachnitis was epidemic among the French troops in 1847-49; it seemed to depend upon a contaminated state of the blood, and bore a great analogy to affections of the typhoid kind." "Epidemics occasionally arise with a decided bias to cerebral inflammation." (Dr. Sandwith.) "Inflammation of the brain is, in adult subjects, a rare disease." (Dr. Todd.) "The cases commonly called brain fever, phrenitis, are nothing more than examples of some form of delirium."

It is admitted that the pineal gland and choroid plexuses are safety-valves for the separation of noxious matters.

What are the inflammations of the eye—that microcosm of the human body—but those of a typhoid, arthritic, cachectic, gonorrhœal, syphilitic, rheumatic, and scrofulous character?

Inflammation of the throat is rheumatic, syphilitic, or epidemic. "Croup has shewn itself capable of transmission by infection." (Dr. Huss on *Diseases of Sweden*.)

Where are the inflammations of the chest (including the pleura, tubes, lungs, and heart) unconnected with a general cause? Look at that epizootic, the pleuropneumonia of cattle; and at the tubercular, renal, rheumatic, typhoid, pyæmic, and bilious origin of most pectoral inflammations. The specimen of the most acute pleuropneumonia ever presented to this Society, and designated by it a regular phlegmon, arose from pyæmia in a case of otitis.

"There was an epidemic of pericarditis in Kilkenny in the winter of 1848-49." (Dr. Lalor.) "The irritating agent in common catarrh is most probably some atmospheric poison." (Dr. Todd.) "Is bronchitis ever a healthy inflammation?" (Mr. Gallwey.)

The abdominal organs, the liver, intestines, kidneys, bladder, are confessedly more subject to the operation of general causes than any other, and I will not weary you by particulars. "Acute peritonitis is so rare, as in all cases to suspect perforation; and chronic peritonitis is always tubercular," says Louis.

I have nothing to say here of the puerperal and surgical conditions and relations of the peritoneum.

The limbs generally are affected by rheumatism, etc., etc., and the skin by the exanthemata, and by a variety of eruptions, which, by general consent, are admitted to be blood diseases.

NERVOUS DISEASES.

We are greatly at fault, I hesitate not to say, in nervous affections. We are too much taken up with the nervous influence, whatever that may be, and forget that the nerves are capable of conveying other matters, more material than their own proper fluid, and that the *vis nervosa* is acted on diversely by an infinity of causes.

It will be admitted with Prochaska, that the nervous system materially influences secretion and nutrition. Therefore, if it be unduly acted on, the secretions, etc., may be vitiated and depraved.

Again, if it be granted that the nerves in any—say inflamed—part are affected with the other tissues composing that part, it follows that they must be influenced more or less by the blood; and, of course, whether that blood be in a more or less morbid condition; and that the nervous system will have its elective affections, in common with the rest of the systems of which the human body is composed.

Each portion of the brain is probably "decreed its province" as regards its affinity for certain agents: thus alcohol acts on the cerebellum; belladonna on one portion of the brain; opium on another.

Take the ordinary expression of the nervous system—that of pain. "Pain is the sentinel of health. Pain is the prayer uttered by the nerve for healthy blood." (Romberg.) "Clinical experience," says Dr. Gull, "almost daily affords instances of not only increased sensibility from a centrifugal excitation of sensitive nerves, but of alteration in the circulation and nutrition of the part following upon it." "Did our means of investigating the nerves," says Dr. Graves, "equal those we enjoy in the examination of the vessels, we should find that in inflamed parts, the nervous matter increases, in many cases, as rapidly and as considerably in extent as the vascular." "Disease commencing in the nerve matter," says Dr. Davey, "ultimately involves the capillaries; and these becoming congested, inflammation and its consequent disorganisations may or may not succeed."

"An hysterical girl was seized twice with inability to speak, and was cured both times by mercury to salivation, after all other means had failed. It naturally leads us to suspect," says Dr. Law, "that there may be more of *real positive organic lesion* lying at the root of those so-called *nervous disorders* than is commonly imagined."

Insanity. "Both reason and science," says our distinguished associate, Dr. Burnett, "favour the idea that insanity is not, and ought not in the first instance, and often to the very last, to be regarded as a disease of the brain, but as a disease *floating in the blood*." "Insanity is more closely allied to hysteria, chorea, tetanus, etc., than is generally imagined." (Dr. Davey.) "I feel thoroughly convinced," says Mr. Smith, "that we ought to view the noisy vociferations, restless mobility, and intensely accumulated excitability and exaltation of the insane, simply as an effort of nature to throw off the *materies morbi*." Hence cases *may* and *do* occur in which "convulsions are salutary, and mania itself a healthy crisis".

I need only refer you to the *Lectures* of Dr. Todd for a triumphant demonstration of the humoral origin of the epileptic, renal, hysterical, puerperal, anæmic, traumatic, typhoid, erysipelatoid, rheumatic, gouty, and toxic delirium.

What do we mean by *brow-ague*, except that the supra-orbital nerve is affected by some aguish or other poison?

"Serious cerebral and spinal symptoms, caused by spasmodic pressure of certain muscles about the cervical and laryngeal regions, which has been set up by *distant irritations*," called by Marshall Hall "*trachelismus*".

"Disease commencing in the nerves of some particular part or organ, may be gradually propagated to the spine

producing all the symptoms which are referrible to an original affection of the nervous centres." (Dr. Begbie.)

Whooping-cough is due to the influence of a poison which gets into the system, and produces its local manifestations on the vagus-nerve. In certain cases, inflammation of the lung arises; and if so, the *middle lobe* of the right one (for reasons I some years ago insisted on), in the same way as sciatica, is sometimes attended with heat and swelling, according to the principle just enunciated.

Asthma. We have all been taught to consider asthma a nervous disease. Of course I do not include the organic condition, *emphysema*.

In addition to various matters irritating the vagus-nerve, including those interesting cases of difficult breathing, probably urinary, brought before the Society, I may name the condition of the system in *dysmenorrhœa*.

Mrs. C. has always a bad cold and sneezing after each imperfect period, and pains in the limbs.

Miss F. has asthma after or at each imperfect period. I attended her with one attack of the greatest difficulty. She was speedily relieved by a diuretic mixture.

Palpitation. Let us beware how we call palpitation a nervous disorder. Take the following not uncommon case. We are called to a patient, probably a female, who reports that she has frequent fits of bad and increasingly severe palpitation. We examine the heart, and find nothing the matter—all is quiet; and then perhaps we call her nervous. The fits of palpitation nevertheless continue. From considerations which I need not stop to name, but probably that she had been confined two or three months before, had had cedematous limbs, perhaps convulsions, etc., etc., we are led to suspect something the matter with the urine. We test, and find it *albuminous*. The problem is solved. The capillaries are obstructed by the thickened blood; the heart labours to overcome the difficulty; and hence the palpitation: in like manner as the capillaries are obstructed, and the left ventricle exposed to rupture, under the influence of sudden grief or terror.

A good illustration of this affection occurred in this (the Royal Berkshire) hospital some months ago. It was from the most perfect reliance on the truth of these principles that I presumed to differ from the prognosis given by the medical authorities. I ventured to assure the patient that there was no disease of the heart; that she should be thankful she had a heart capable of grappling with the difficulty under which it temporarily laboured; and that, as the urine acquired its normal composition, the heart would return to its natural action. The event proved the accuracy of this opinion.

Chorea is a blood-disease. Dr. Elliotson saw an instance which arose from a sore which had been running in the thigh, and suddenly healed up.

Tetanus and *Hydrophobia* are blood-diseases. I will merely observe, that a wound has as much to do with the production of tetanus, and the bite of a dog with that of hydrophobia, as a wound has to do with the production of erysipelas, or a scratch with that of phlegmonous inflammation; and no more.

"This change in the blood," says Dr. Todd, speaking of tetanus, "may be caused either by the introduction into it of some new material from without, or by the generation within it of some new matter possessing highly poisonous qualities."

In what do the muddled brain, and spinal spasm, and cervical rigidity, in imperfect catamenial relief, differ from tetanus, *except in degree*?

"The clinical history of trismus nascentium and of laryngismus stridulus shows that these diseases must be precisely similar to tetanus in the essential points of their pathology," says Dr. Todd.

I may appropriately finish this section of my subject by a passing allusion to that class of nervous susceptible individuals who appear to be *all nerve*. They can bear nothing like other people; everything is dreadful. Pain is agony, and palpitation a "twinging vellication". In these cases, there is a deficiency somewhere; "the animal spirits", as

the fathers in physic well say, "are generated out of order, and sent out of order to the nerves."

CAUSES OF INFLAMMATION.

Having premised that the blood is already in a state of retrograde metamorphosis; that the individual is exposed to one of the ordinary causes of inflammation; and that inflammation of some organ ensues,—let us proceed to analyse the common explanation of its causation and its treatment.

Say the individual is exposed to *cold*, and that inflammation of the lungs follows; and that he is bled, leeches, blistered, nauseated, mercurialised, purged, sweated, and starved; and that he fortunately recovers. What is the usual explanation of all this, if any is ventured on?

Taking cold is so intimately associated with our notions of inflammation that we cannot think of one without fearing the other. Notwithstanding the hourly use of these more than "household words", I may be permitted just to ask what is meant by "*taking cold*"?

"The equilibrium of healthy nutrition", says Dr. Bird, "is disturbed; the tissues cease to approximate true nutritive materials; the assimilating functions of the stomach and collatitious viscera are deranged; and the eliminating excretory action of the liver, skin, and kidneys, further impaired or suspended, so as to admit of effete and imperfectly oxydised materials reverting into the circulating fluid."

I need scarcely insist on the importance of the skin, when it is remembered that the amount of fluid passing off amounts to more than two pounds in twenty-four hours—as much as from the kidneys in the same period, and nearly twice as much as from the lungs. An animal painted over with impermeable varnish quickly dies.

The first effect of the impression of cold then is, that the skin is thrown into a state of disorder.

I may here remark that *heat* gives *cold* equally readily with cold and moisture. A very intelligent lady observed to me, "The only thing that gives me cold is a *hot sun*." Whether we admit this as our theory or not, we allow it in our practice: all our remedies for "catching cold", from a hot bath to a treacle-posset, have the same end in view, viz., to act on the skin. These remedies are multifarious, and include, taking something warm; putting the feet in hot water; going to bed, and sleeping under nine blankets; lying in bed; keeping in the warm; working it off by strong exercise, as a long walk; a good dance; by getting "jolly drunk", etc.; in addition to a sesquipedalian list of medicated potions.

Well, then, having been exposed to cold, and these remedies not succeeding, or not having been employed, the common observation is, "it flies to his lungs"; and the sufferer gets inflammation there.

What do we literally mean by inflammation in general, and inflammation of the lungs in particular? Why, that there is a *fire* there; and that the indication is apodictic—to put it out as soon as we can. All our remedies, from bleeding to starving, are directed to this end, because they are "good for inflammation", regardless, or nearly so, of causes and conditions. I beg very respectfully to challenge every item of such an exposition.

What do we effect by bleeding in inflammation of the lungs? Admitting that there is some morbid matter in the blood, by bleeding we lessen its quantity: remembering that the whole of the blood passes through the lungs at least twenty times in an hour, by bleeding we lessen their labour: recollecting that the law of inflammation is to spread, by bleeding we diminish or arrest a further deposit in one lung, and prevent its extension to the other: and the system may be so charged with plethora and crassid stuff, that by bleeding we start the organic processes, as we do in cases of poisoning, as of opium. So far is it clearly indicated. Bleeding has no direct influence, however, on the inflammation already existing; it and all other remedies only lessen, divert, direct the morbid stream; and nature does the rest.

Bleeding, leeches, starving, blisters, lessen and divert; mercury, emetics, sudorifics, purgatives, direct and stimulate the organic processes to augmented action, and thus to remove any foreign matter, wherever it may be, and which is abhorrent to nature.

There is no remedy which has so universal an application, and very justly so, in inflammation, as mercury. "The use of mercury in inflammation of the liver", says Dr. Elliotson, "is indisputable": but I have not seen it of any more use in *hepatitis* than any other *itis*. It is not because there is inflammation of the liver that it is to be given, but because *inflammation exists*. How does mercury operate? "The obvious effect of mercurials", says Pereira, "is an increased activity in the secreting and exhaling apparatus." "Not as moderating the hyperæmic process," says Mr. Simon, "but as determining the necrosis and dissolution of the inflammatory products."

Again, *argumentum ex remedio diducere conceditur*: if inflammation were a *morbid entity*, which it is generally—I have endeavoured to show how erroneously—considered to be; if mercury be powerful in inflammation—which universal testimony unanimously admits,—then should it be omnipotent in those cases of inflammation where there is nothing but unfettered inflammation to subdue, viz., in traumatic inflammation.

But is it so? "In traumatic inflammation of the eye, mercury is utterly useless," says Mr. Critchett. Mr. Liston raised his voice against the use of mercury in traumatic inflammation. Mr. Hancock treats lungs wounded by fractured ribs, not by bleeding, but with opium. A boy, 5½ years old, was run over by a cart; excruciating pain followed, and intense peritonitis. How was he treated? By bleeding, leeches, blisters, purgatives, mercury? No; by none of these, but by opium: four or five glasses of port wine a day, and plenty of nourishment. He recovered. "The great point", said Mr. Stanley, who treated him, "is to support the system under the intense irritation excited by the visceral inflammation."

Let us return now to the treatment of inflammation. Obviously the treatment of bleeding, etc., is only applicable to those cases where the loss can be sustained without damaging the patient's constitution, or jeopardising his existence. Surely it would be madness to take it away from those who had too little already. How often, nevertheless, does the following lamentation grate on the ear. A frail creature is seized with inflammation, say of the lungs, and dies. "Poor thing!" it is exclaimed, "she was so weak, they" (meaning the doctors) *could* not bleed her; only a few leeches and a blister were applied; she could not bear the remedies indispensable for its reduction, and essential for its cure; and she sank in three days."

How much longer will rheumatism be treated as inflammation? A blooming girl, aged 18, had suffered from rheumatism and consequent heart affection in her childhood, and was rescued from impending mischief by steel, quinine, and good diet. In the autumn of 1854, she was again attacked with acute rheumatism. The treatment was leeches, blisters, purgatives, and starvation. Notwithstanding, however, the disease advanced with unmitigated severity. A few weeks before her death, she was attacked with a *strong inflammation* of the heart. Leeches were renewed; blisters reapplied; purgatives repeated; starvation enforced with dogged pertinacity; so that, at the end of three months, every bone in her skin could be counted, and death was welcomed as a relief to her sufferings.

"One of the greatest, if not the greatest and most widespread error in the practice of medicine, viz., the treatment of all local, acute, and febrile diseases as inflammation," says Dr. Stokes.

"The term inflammation—a word formerly in the mouths of our professional brethren on all occasions," says Mr. Skey, "is now limited in its application, and should be yet more limited; and I believe, in a yet more advanced state of medical science, will be restricted to an actually rare condition of the system."

"Perhaps no greater improvement has taken place in

the treatment of disease than the administration of wine in inflammatory diseases." (Erichsen.)

"No man is fit to treat general disease or local inflammation until he has conquered that fear of stimulants which a long course of erroneous teaching has instilled into his mind." (Dublin reviewer.)

I may say of the old treatment of inflammation what a reverend divine says on another subject. "We see it in all its strength, and feel it in all its mischief. We may read what it has done; we may fear what it will do; and see what it does: but we have loved it, and loved it so well, that we will not be cured of our love." (Rev. Mr. Yates.)

Let it not be understood, I pray, that I am railing against the treatment of inflammation by bleeding. In fit cases and subjects, there can be no question but that bleeding is a remedy of great power and admirable efficacy, and as clearly indicated, though not so indiscriminately employed, now as ever.

ACCIDENTAL DIRECTION OF MORBID TENDENCIES.

A very interesting subject, on which I have the materials for dilating, did time allow, is the accidental direction of morbid tendencies.

An individual is disposed to disorder of a particular (say tubercular) character; it may and does often depend on accidental circumstances to what part or organ the mischief is directed. Examples must have occurred to every member of the profession. For instance, a young lady is compelled to fight the battle of life as a governess. The chances are that, if she does not become consumptive, she will become insane. Many a precious child has been lost to the world through the cramming haste and witless ambition of its parents. In an artisan, hard worked, ill fed, and worse lodged, the *lungs* will give way. In a girl, under similar circumstances, particularly if nature should be thwarted in her periodic effort, the *abdomen* will suffer.

This disposition to disease may be congenital, as in the instance just named, when it is called *predisposition*; or it may be acquired, as in the syphilitic condition. We may, however, carry the elements of mischief about us—say epidemic, syphilitic, etc.—for a longer or shorter time, awaiting some accidental and favourable cause to excite its irruption. "The poison of syphilis, being once received into the blood," says Mr. Erasmus Wilson, "remains there for years, and possibly, indeed certainly, for the rest of existence." The organic functions may, however, be so nicely balanced that it has no local manifestation; but let this equilibrium be disturbed by care, want, or any tribulation, any number of years afterwards, and then it may be unmasked, and show itself in all its hideous deformity.

"It probably would not be erroneous to allege," says the *Lancet*, "that the whole of the 2,362,236 persons which are mentioned as constituting the population of London, are every one, man, woman, and child, affected at the present moment by the agencies which produce cholera; and that, in many thousands of them, a few doses of castor oil, or any other active purgative [or any other disturbing causes, it might have added], would be sufficient to excite the disease in its most virulent form."

"In January 1847," says Dr. Thom, "the 86th regiment returned from Scinde to Bombay, in several steamers. While landing at Bombay, in the afternoon, one boat's load of men, on their way from the steamer to the landing-place, were exposed to a shower which completely drenched them; and in this condition they had to remain till they landed, and marched up to join their comrades in the town barracks. About twelve o'clock that night, five or six cases of cholera were admitted, and several more with diarrhoea.

"On inquiry next day, I found that *every case* was in the men who had been wetted in the act of disembarking. The whole of the cases appeared in this particular party within twenty-four hours after their wetting. For three weeks more, while the regiment occupied the barracks in Bombay, no case even resembling cholera occurred; but, on being moved across to go to Poona, the same men, after the first day's march, showed in several instances distinct signs of cholera.

There must have been something *latent* in the constitution of the men, which, without wetting and marching, might never have become manifest, but died away under the quiet and sanitary influence of the season. It must be borne in memory that, six months before, the regiment had between 400 and 500 cases of cholera, and lost by deaths 240."

The exciting cause may fortunately, but rarely, never occur. On the other hand, circumstances may have preceded rendering the system peculiarly susceptible of the influence of a poison. The poison may enter the system, and be carried off unseen, through fortuitous and extraneous channels; or it may be topically arrested and evacuated, and thus blunted in its virulence; or a trifling injury may excite, in a state ripe for mischief, the most terrible and fatal disease.

"There may be conditions in which the system is ready for the production of organic disease for an *indefinite time*. This may be true, not only with respect to tubercular disease, but also in many other essential affections, including a variety of fevers. And this disposition, this silent state of the malady, may itself pass away, and none may ever know how near the individual was to the invasion of a dangerous or fatal disease." (Dr. Stokes.)

Mr. James, of Exeter, in speaking of the remarkable effects of old ulcers in giving vent to the materials of epidemic poisons, says, "But the most remarkable proof of ulcers affording such relief from noxious matter is probably to be found in the singular exemption from infection of persons labouring under them during the influence of a pestilential epidemic."

There was an epidemic of erysipelas in University College Hospital. Professor Erichsen observed, that "all the recent wounds exposed to the morbid influence became affected; and that the *suppurating* wounds mostly escaped." "If bubo suppurates, no secondary symptoms will follow," says Mr. H. Lee. "If the disease", referring to Indian plague, "could find an *outlet* by means of a bubo, it might do well; but, if not, the poison was sure to prove fatal," says Dr. Hirsch.

I have remarked on previous occasions, that one of the most curious occurrences in practice is, how small an injury, in certain states of the system, will excite the most terrible disorders. When erysipelas prevails (as in hospital), the most trifling operation may lead to a fatal issue in a patient who, had he been untouched, might and would have remained uninjured. Let a brewer's man get the most trivial injury, uncontrollable phlegmonous inflammation may be induced, who, without this injury, might have swilled for years, unhurt, unscathed.

"Within the tropics, and at certain times of the year, the slightest cause will bring on tetanus," says Dr. Jackson. "Tetanus is brought on by the slightest scratch," says Dr. Keenan. Mr. Coulson "tapped a patient; *malignant* disease appeared in the wound, which never healed. No disease was found elsewhere. It is essential to remember," he adds, "that, in unhealthy persons, *very slight* local causes may determine severe and specific disease, according to the constitutional predisposition of the patient. *This is a general law of pathology.*"

NON-RECURRENT DISEASES.

A very interesting chapter might be written on those diseases which occur *but once*, as a general rule, in an individual. Without entering on disputed ground, I may name small-pox and the other eruptive diseases, and perhaps syphilis. "A patient who has the first time an indurated chancre *never has a second*," says the Dublin reviewer. This is not easy to account for. I believe we have made no advance in the solution of the question since the time of Avicenna.

Diemerbroeck, in speaking of the causes of small-pox, says, "Avicenna and most of the Arabians refer the material cause to the impurity of the mother's blood, stagnant in the woman with child, and with which the birth was nourished in the womb; which corruption, they write, lies dormant so long in the body, till, by virtue of some specific efficient cause, it be provoked to a fermentaceous effervescency; and by that means separates that defilement, adhering from the birth to some minute particles of the body, and, being so separated, pushes it forward, together with the particles of the blood so defiled by it, to the extreme parts of the body, and there raises up wheals. Hence it was that the Arabians believed that all men were subject to the small-pox, in regard that impurity was again to be separated from the parts. So that if that specific fermentaceous effervescency be strongly and efficiently performed at the first coming of the small-pox, then that impurity becomes totally evacuated; and then the person to whom that disease happens lives free from that distemper all the rest of his life. But if that effervescency be not violent enough, that impurity happens not to be totally expelled; and so the same person, when the reliques of that defilement ferment again, upon some other cause, may happen to have the same distemper a second and third time, but rarely a fourth."

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In other words, we should now say that, in the advent of these diseases, some material was used up, or that they left behind them some incompatible substance. Closely allied to this subject is the prophylaxis of disease; that is, the prevention of one disease by the previous occurrence or presence of another: for example, small-pox by vaccination, phthisis by ague, measles by small-pox, etc.

ANTAGONISTIC INFLUENCE OF DISEASE.

This term means the cure of one disease by the inter-currence of another. Examples are numerous.

Mrs. T.'s daughter was born healthy, and continued so till six years of age. She then began to be mischievous, talkative, etc. This increased for a year and a half: she was always in mischief, climbing on the house-tops, and sitting on the chimney-pot, etc.; and incessantly talking and restless. At the end of a year and a half, she became dull, stupid, inanimate, dirty, filthy, and perfectly insensible to cleanliness and decency, and rebellious to all control and management. She was not able to feed herself. This state continued for another year and a half. During these three years, she had had frequent convulsive fits, and they had increased so much during the last few months as to resemble *one continued fit*. At this time, the other children had scarlatina; in her turn she took it; had it severely; slept almost continuously for four days and nights, and was with difficulty aroused to take about once a day a draught of toast and water. In fact, she was almost put away up stairs, with a hope that death might, and a belief that it would, come and put an end to her misery. After four days, however, she awoke from her torpor, and recovered rapidly from her disease. From this time she never had a single fit. A fortnight afterwards, she was quiet, orderly, sensible to everything around her, decent and clean, teachable, and at once obeyed the commands of her mother. What is curious, she was now able to repeat the hymns she learnt and knew well three years before. All that she now appeared to suffer from was a deficiency of the knowledge of things for a girl of her age; but she was perfectly capable of receiving impressions. She continued to improve, and, twelve months afterwards, the report was, "She is now a fine girl, *before* those of the same age in intelligence, and does not differ from them in any particular."

I was attending Mrs. G.'s child with laryngismus stridulus. It had had it three months, and I was making little impression on it by treatment. Scarlatina now came into the house. I watched with intense interest its extension to my patient. It came, and, from the moment of its access, the crowing ceased, and never returned.

Dr. Cowan related to me the case of a lady with diabetes, cured by the supervision of gout.

Mr. Wickham informed me that a patient had been admitted into the Winchester Hospital with double cataract and diabetes; and that the cataracts entirely disappeared under the influence of the diabetes; and the sight was entirely restored.

Connected with these cases may be named those extra-

ordinary complementary efforts which nature makes when she only *partially succeeds* in some of her natural processes: for example, the diarrhoea of dysmenorrhoea.

TREATMENT OF DISEASE.

Pursuing the same course, we now come to the treatment of disease by medicines.

We may begin with this principle, "that the local mischief can never be repaired so long as the blood continues diseased; and if the blood by any means assume its normal constitution and its healthy vitality, the local affection, if no vital organ be too extensively diseased, will get well spontaneously," says the Dublin reviewer.

The first point, then, worthy of all observance is, to pursue the general indication, to treat the primary pathological condition.

"It is well known," says the *Lancet*, "that the deaths of thousands of soldiers, registered as owing to fever, rheumatism, pneumonia, and other causes, are in reality to be ascribed, if we ascend to the primary pathological conditions, rather to *scurvy*—a condition upon which the fever, rheumatism, and other immediately fatal diseases, are but *epiphenomena*."

Take anemia in a girl. Look at the hundred and one complaints of pain in the side, stomach, back; of palpitation; of sleeping little; eating less, and vomiting that; and of being fit for nothing. Give her *steel*, and how surprisingly all her ailments drop off, one by one.

In rheumatic delirium with pericarditis, Dr. Todd observes, "Important and serious as is the affection of the heart, as compared with the delirium, it is just now of *no moment*; for, if the delirium be allowed to continue, there is great danger of the patient dying suddenly from exhaustion."

The same treatment must be pursued in what is called *bilious pneumonia* of the *upper lobes*, with delirium. We may be horrified to find half the lung solid; but we must forget for the time that there is such a thing as inflammation of the lungs, and pursue the general indication.

"I think we may lay it down as a general principle," says Dr. Stokes, "that the more the secondary affections of fever are anatomical, the greater will be the utility of *stimulants*."

"There is no mistake more fatal in fever than the withholding of food and wine," says Dr. Graves.

I saw a young man, aged 22, with bloody urine, cough, pains in his limbs, nodes on his shins, etc. He had had, he said, inflammation of the kidneys, lung, dropsy, etc. He was admitted into the hospital, under Dr. Cowan, who shrewdly treated him antisyphilitically, with sarsaparilla and hydriodate of potass; and his kidneys, lungs, nodes, etc., got rapidly well.

In certain low conditions of the system, as in some cases of erysipelas, the amount of stimulus required and given would appear fabulous if put on paper. A young lady, aged 16, with influenza and bronchitis, was so weak and fainting that she took a bottle of wine a day, for three days successively, with benefit and with cure.

There is no class of cases that shows the value of treatment more than this. Treatment is everything; it is decision or doubt, victory or a victim. One plan "gives the patient a *chance* of regaining an equilibrium between nutrition and excrementation; the other plunges him down the hopeless descent of regressive metamorphosis." (Dr. Bucknill.)

One atmosphere may prevent the due action of our remedies; another atmosphere may be so curative as to render other remedies unnecessary. "Pleuritic complications immediately disappeared on our leaving Scinde for Bombay," says Mr. Hunter.

The *Harmattan wind* "is *pancratic in disease*. Its first breath," says Dr. Lardner, "completely banished intermittent fevers. Those who had been enfeebled by the practice of excessive bleeding, then prevalent there, soon recovered their strength. Epidemic and remittent fevers, which had a local prevalence, disappeared as if by enchant-

ment. But the most wonderful effect of this atmospheric phenomenon was, that it rendered infection incommunicable, even when applied by artificial means, such as inoculation."

In some cases the indication is obscure. A healthy young man, aged 24, in July 1846, went to Dover, and stayed twelve days. Ague was in the house in which he sojourned. In June 1847, nearly twelve months afterwards, he was attacked with ague of the tertian type. It was readily cured by quinine. Four months after this, I was called to him again with jaundice. He was treated for some days with no effect whatever. I now observed that he was better and worse *every other day*. Remembering his ague, I gave him two grains of quinine in infusion of senega every six hours. The effect was magical. From that day he began to improve, and his cure was rapidly completed.

The primary indication, I need scarcely add, is in many diseases entirely unknown; and the only reasonable plan of managing them is to shorten their *secondary effects*. Thus, we employ stimulants in snake-poisoning, or artificial respiration in an overdose of chloroform, to keep life going till the poison passes off.

In some of these, however, we are encouraged to hope. "Cancer, gout, scrofula, I cannot doubt," says Mr. Simon, "will presently yield to philosophical investigation what they have refused to blundering quackery; and that, within the life-time of many here, there will be a specific treatment of each diathesis, founded on an exact knowledge of the physiological laws of its manifestation."

Special Indications. As practitioners, in pursuing the general indication, we must not forget any special indication that may be present: as the dilatation of the pupil in iritis, the relief of pain, or the prevention of spasm in tetanus or hydrophobia.

I may be allowed here to digress for a minute to protest against the plan usually followed in the treatment of these dire diseases. Surely it is time another method was followed than that of killing the disease, and frequently the patient, by strong medicines. The direction probably is as has been suggested—*terebinthinate* and that class of remedies, and the *chemical diuretics* of Dr. Golding Bird. By these and such like we should have a chance, by a charmed catalysis, of involving the peccant matter in their penultimate transformation.

If we analyse our special treatment of disease, we shall find that it amounts to little beyond fulfilling the general indication; and if we proceed still further, we shall discover that this mainly resolves itself into two modes—the stimulant and the antiphlogistic. It comes therefore to this, that in all diseases we find the system in one of two states, either above or below par; and we act accordingly. So that a practitioner, armed with mercury, opium, and antimony, in one hand, with steel, quinine, and wine, in the other (with a lancet in his pocket), might go forth and treat, and successfully too, most diseases that flesh is heir to. Such a practitioner was the late Mr. Liston. "His medical treatment consisted principally in the exhibition of wine, antimony, and quinine—*three remedies*; and which he employed with consummate skill."

Let it not be inferred from these observations that I wish to ignore the importance of the "*adjuvantia* and *lædencia*" in medicine; for in truth, a due attention to these is indispensable to its successful exercise.

What I have no hesitation, however, in asserting is this; that being correct and clear in our general principles, the rest will come with double force; our directions will be definite in their warnings, liberal in their allowances, and absolute in their prohibitions. "A morbid derangement," says Mr. Syme, "if examined with the light of general principles, can be seen correctly, although entirely misunderstood when surveyed through the narrow chink of (blundering) specialism."

If we rigidly examine our daily practice, we shall find that in the vast majority of cases, we treat the patient and not the disease; that our remedies are palliative, not

aggressive, and that we pursue much the same system in a great variety of apparently dissimilar affections.

My impression is, that diseases have been made too much of; they have been described as if they were "isolated entities", and treated, instead of the state that gave rise to them.

When the next system of nosology is published, I anticipate that it will be much curtailed in its dimensions, and that it will consist of a few types of disease, with the local affections, as accidental, not necessary concomitants.

It is probable that the types of disease are not numerous; that there is a greater unity of type, whatever the local manifestation may be, than is dreamt of in our present philosophy. Our daily practice teems with the materials of unsuspected alliances, could we but recognize them.

It is more than probable that small-pox, measles, and scarlatina, and other classes of disease, are merely allotropic of each other, and that, under certain conditions, they may pass and re-pass into each other.

"What the conditions are which determine these conversions, it is at present," says Faraday, "impossible to say."

SURGICAL DISEASES.

It would, probably be considered an omission by the Society I have the honour of addressing were I not to say something about surgical diseases.

The same rules apply to the medical treatment of surgical as to the so-called purely medical cases. Surgical diseases recognize also a similar pathology.

Take an example or two.

Aneurism. "There is, in the frames of those persons, a general inflammatory state of the whole arterial system, probably a morbid condition of the blood, and a local inflammatory condition of one artery and set of vessels. The surgeon will see that unless these conditions be removed or mitigated, he can expect beneficial effects neither from compression nor from any other mechanical contrivance." (Edinburgh reviewer.)

"The giving of wine on the third day," says Professor Paget, "after the operation for hernia, was dictated by the fear that a peritonitis would presently ensue—the localised indication of a general disease. Same in phlebitis", he adds, "some are local, others are declaratory of diseased blood."

I might run through the entire list of surgical diseases in the same fashion, but time forbids; I must hasten to the conclusion.

CONCLUSION.

My course, it must be confessed, has been somewhat erratic. It is the course, however, through which I have been almost involuntarily carried; the consideration of one subject has led naturally, I trust not violently, to that of another.

It must be manifest that some subjects have been touched lightly upon, others necessarily omitted, and certainly I have not exhausted a tithe of the materials which my notes supply.

All along I have endeavoured to adduce concurrent testimony, and to include my own in the opinions of others. I cannot, therefore, be charged with having presented my subject under any unauthorised phase; much less have I desired "impiously to set up my own small judgment to overturn all that has grown up under the directive influence of men plainly born to be physicians, out of the ever-varying character of human maladies, throughout long ages, and over all the accessible regions of the globe."

My aim has been to shew that there is a greater unity in disease than is imagined, and a much greater simplicity in its treatment than is practised, were we not trammelled by what is called authority, but which means unthinking routine.

It is easier to follow a path which is beaten, than to seek, with difficulty and perhaps danger, a shorter cut, untrodden, for ourselves; at the same time, we may have a strong conviction that there must be another way, and that the old

one, though that generally travelled on, is tortuous and circuitous.

We go with the stream nevertheless, and thus it is we too often make a compromise between our consciences and our conveniences, unwilling to differ, and afraid to doubt.

It may be urged that where so much is unknown, we may be well excused from committing ourselves to any theory. "After these discoveries", says Liebig, "the organism offers indeed to the experimentalist enough that is not comprehended, but nothing that is incomprehensible."

"What is perceived", says Humboldt, "is far from exhausting what is perceivable."

Practical men may exclaim, What is the use of any theory about disease? All that we want, is to know how to cure it. It may be replied, "practice, without the aid of scientific theory, is mere groping in the dark." "Every quality of a body", says Liebig, "gives, under certain circumstances, a key to open some closed door; but theory is the master-key with which you may open all doors. Theory is the sum of all practice; it depends on the most exact knowledge of facts and natural laws, and is produced by this knowledge."

"An hypothesis colligates the facts, demonstrates their correlation, traces the analogy of unconnected observations, evolves from the multitude of facts—where no apparent brotherhood consists—a common principle, the detection of which recalls them from confusion to system, from incomprehensibility to science." (Sir W. Hamilton.)

With regard to the humoral pathology, if any one doubts, let him direct his attention to the subject for a short time, and I am convinced his niggard acquiescence will close in full belief.

"Had", says our learned member, Dr. Burnett, "the scientific mind been as steadily attracted to the subject of late years as it was at first, the high probability is, that much more real and practical progress would have been made, both in physiology and pathology, than we can now boast of." I entirely agree with him.

All physiology directs, all pathology corroborates, all chemistry proves, and all practice confirms, that of all the pathologies, the humoral is the correct one. The full current of investigation is proceeding in this direction.

It gives a reasonable explanation of pathological phenomena, and of those methods of treatment which experience has sanctioned; while it simplifies everything, suggests new objects, and confirms old results of inquiry. Finally, it consummates the end and aim of all our labours; it gives facility to those who minister, and help to those who suffer.

Reading, June 1855.

BIBLIOGRAPHICAL NOTICES.

ON THE INFLUENCE OF EDUCATION AND TRAINING IN PREVENTING DISEASES OF THE NERVOUS SYSTEM. By ROBERT BRUDENELL CARTER, M.R.C.S., etc. 12mo., pp. 438. London: 1855.

MR. CARTER came before the profession as an author about two years ago, and produced a very lucidly written and altogether excellent little *Treatise on Hysteria*. In the work now before us, whilst following out the same train of thought, he has taken a somewhat wider range. The several topics embraced in the author's design are separately discussed under three heads, The Nervous System, Physical Education, and Moral Education. It will thus be seen that Mr. Carter's present treatise is not exclusively medical. Whilst saying this, however, we would guard our readers against the idea that the author violates professional propriety in following so many bad examples of the present time—writing for the laity, in virtual solicitation of emolumentary practice.

Mr. Carter's exposition, in the first part, of the present state of our knowledge of the Nervous System, is clear and accurate, and is well sustained by appropriate illustration.