On growth, or, Health and diseases of youth / by A.M. Bureaud-Riofrey.

ON GROWTH

OR

HEALTH AND DISEASES

OF YOUTH

BY

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PRÉFACE.

Having practiced fifteen years in London, where I have been frequently consulted for young ladies in cases of spinal diseases, I found from experience that my young patients were seldom affected merely by spinal deviation, but were generally labouring under some malady resulting from irregularity and disorder of growth. I was consequently led to view spinal deviations as a disease incidental to female youth, and connected with irregularity of growth, but the deviation in itself being less important, although the most apparent. This discovery unnoticed by any other medical man enlightened my practice, and I found many diseases of youth, such as consumption, palpitations of the heart, nervous affections, presenting serious symptoms, were only false or mistaken consumption, momentary trouble of the heart, and sympathetic nervous affection, that disappeared, when the growth of an organ had effected its evolution. This useful discovery led me to avoid the energetic means

that generally produce disturbance in the phenomenon of growth.

It may justly be said that English physicians are most successful in the treatment of acute diseases, owing to their energy : but the irregularities of growth are rather like chronic diseases, in which every violent medication proves more fatal than useful. Much patience and knowledge are required in these cases ; for diseases cannot be cured merely by the touch ; medecine is an art and a science very complicated ; it demands an enlightened and elevated mind to follow this art and this science with success. The ignorant alone in or out of the profession can be sceptic, as to the real benefits of medecine : but the more medical science is elevated, the less is it likely to be understood or appreciated by the vulgar.

A common error is to suppose a disease is produced by one cause only. While experience shows that the same disease may depend on many causes and each cause gives to each disease a peculiar character ; then a knowlege of the cause must lead to the knowledge of the treatment. In my Treatise on "Physical Education," I considered growth in all its bearings ; in my present work, I consider it in relation with that age in which female youth is susceptible of so many affections, which being mistaken, are ill treated and consequently fatal. The learned Quetelet of Bruxelles has proved by numerous statistical facts, that the period of woman-

hood in young females was the epoch in which their life was most in danger. If the mortality in girls is greater during the period of approaching puberty, observation shows how many young creatures fall victims to the disorders of growth : experience also proves that young people sent to warm climates for mistaken consumption would have recovered in Paris or London, had their state of growth been better understood.

It is generally known that, if a tooth grows between two others, it is stopped in its growth and that, if the chest be narrow, the lungs and the heart cannot have full play : it is known also that nearly all irregularities of the bones, the chest, the spine, the ribs, compress the lungs and prevent their full expansion. In many young ladies apparently consumptive, it may be remarked that one or two internal organs have not completed their evolution; for instance in many young persons threatened with consumption, the constitutional change indicative of complete growth in females, has not been effected, or is very irregular in its manifestations.

Whatever may be the opinion of parents, they must know that puberty is a very important period in youth, that the phenomenon of growth must be attentively watched, and that it is very incautious to send children to school, and leave them to the chance of good or bad medical attendance. As it is rational to apply to an oculist for diseases of the eyes, so it

should be rational to apply to medical men, who have made the health and disease of youth the constant subject of their studies and meditations. As there are diseases peculiar to infancy as croup, and convulsions, requiring peculiar care; so there are diseases of youth that have a peculiar character.

Children are born with healthy or morbid predispositions; when healthy, they grow without effort, when on the contrary they are delicate or sickly, the difficult evolution of every organ in its turn is the cause of a disorder of growth, hence children that have difficult teething, have convulsions; convulsions shake the whole economy in such a way that they weaken it; the second dentition is more difficult, the growth is irregular and puberty does not take its course in its proper time. For a skilful physician, youth is the time to engraft health and strength on a weak constitution. In the animal, as well as in the vegetable kingdom, the strength of formation is more active at a tender age.

Much is done for the intellectual education of children, but at school or at home little is done for their physical improvement: children are actually left to chance, yet physical health is the primitive foundation of all happiness.

According to the most talented observers as well as the most common, all causes which lower the tone of bodily health stop growth and predispose to disease; and of this kind, are sedentary occupations, resi-

dence in damp cities, or in low, unhealthy and cold situations, unwholesome or improper diet, imperfect clothing, and at the approach and after womanhood the influence of depressing passions, or of over excitement; in fact all the errors of physical education.

The celebrated physician who was judged worthy of attending the virgin Queen of England, now a young mother, has traced to the mismanagement of children the origin of constitutional disorder which leads ultimately to consumption. "The seeds of disease, says sir James Clarke, which are to ripen at a later period of life, are frequently sown during infancy and childhood, in the first case by imperfect suckling, or the entire substitution of artificial food for the natural and only proper nourishment of infants; and in the second, by improper and over stimulating food : by a residence in large towns, and in confined, over heated appartments; by deficient exercice in the open air, imperfect clothing, etc."

"Girls, continues the royal physician, suffer more especially from some of these causes, such as confinement to the house, often in close rooms; from sedentary occupations; too short and insufficient exercise in the open air, and too much mental application. The first consequences of these are, diminished circulation through the surfaces and extremities, imperfect digestion and assimilation, a constipated state of the bowels, a congested state of the internal especially of the abdominal blood vessels, and very generally an irri-

tated state of the digestive organs; then follow an unhealthy condition of surface, a dry, harsh state of the skin, generally cutaneous eruptions, chilblains, sore eyes, glandular swellings, and *not unfrequently curved spine*. The appearance of this last symptom is often the circumstance which excites the alarm of parents, who instead of directing their attention to the real cause, generally consider the alteration in the shape as the great and primary evil ; — and a variety of mechanical remedies are had recourse to, which not unfrequently add to the mischief by still further deranging the general health. "

In an eloquent fit of criticism, Dr James Johnson says in speaking of spinal diseases :

"It is only by opening the eyes of parents and teachers to the extreme frequency of this disease, and by holding up to them the picture of its miseries, its causes, and the means of prevention, that any rational hope can be entertained of checking its fearful ravages. These expressions perhaps, may seem unnecessarily strong to such members of the profession, as from particular circumstances have not been led to see much of this disease : to those however, who are fully acquainted with its character, and who, like ourselves, have had occasion to explore for many years past the silent inroads it has been making upon the vigour or beauty of one or other of the daughters of almost every family of our acquaintance, our language will not appear unmeasured. In truth, continues the same

Dr Johnson, we are sometimes disposed to go so far, in reflecting on this subject, as to doubt whether even the giant malady of our land, consumption, is to be considered as more terrible than the one under consideration! Consumption, it is true, is daily and hourly seen decimating the ranks of youth and beauty, and dooming thousands and tens of thousands of its interesting victims to untimely graves, unchecked and almost unopposed by medicine. In this case, however, the period of disease is generally short, and the sufferings of the patient inconsiderable; the malady being chiefly terrible from the desolation and misery it produces in the breast of surviving friends. Spinal disease, on the other hand, while it rarely kills, is productive of the greatest sufferings both physical and moral, to the miserable subjects of it. While still preserving the aspect and feelings of health (as often happens) they are hardly capable of enjoying any of the pleasures, or of performing any of the duties of active and social life; and happy, certainly would it be, for many of them, if like the victims of consumption they might die and be at peace, instead of dragging on a painful and useless existence from year to year, dying every day they live.

" It is truly at once a melancholy and appalling consideration how large a proportion of the young ladies of the present day, who are fashionably educated, whether at boarding schools, or under the domestic roof, are the victims of some degree or other of this

affection; and in reflecting upon this, we cannot help being struck with the humbling lesson which is thereby read to the pride of man; is then, all our boasted intellectual cultivation of the present day, and our mental superiority over former times, purchased merely at the price of our physical perfection? Is such the poverty of our common nature as to be unsusceptible of the simultaneous and coequal cultivation of both its parts? Is knowledge a weakness? Is genius a disease?

" One thing at least is certain, not only that the bodily vigour of the females of the upper and middle classes of society has been materially injured by the fashionable modes of instruction that have now for many years prevailed, but that even the general health of the present generation in England has suffered most grievously from the increased diffusion of education among the people: and it seems to us a question worthy of the gravest and most mature consideration, whether the sum of human happiness, virtue and social usefulness, has or has not increased proportionably.

" In asserting so general a prevalence of this form of spinal disease, we think it necessary to add that, hitherto, it has almost constantly been overlooked or mistaken by the generality of practitioners as well as by the patients themselves.

" How frequently, continues the same learned physician, do we meet with weakly women who have been

treated, perhaps for years, as the subjects of one or other of the abdominal pelvic, or thoracic viscera, (according to the site of the pain) by leeches, blisters, issues, etc., or who have been considered as purely nervous, or simply debilitated; or as labouring under a local disease of the joints or muscles of the extremities; but whose ailments were altogether the consequence immediate or remote, of some *spinal disease?*"

There may perhaps be a little exaggeration in Dr Johnson's remark, but they are evidently intended to shew the danger of a state of health too generally neglected.

Having given the opinions of Quetelet and nearly all Registrars, who show that from fourteen to eighteen is the most dangerous period of life for girls, the annual returns now made in England and the great care taken by the able secretary in making these returns, place the matter beyond a doubt.

As a foreigner, I claim the indulgence of my readers for the many errors in language that naturally occur.

I have resided long enough in England to be acquainted with the habits, manners, and state of medical science in that country. I have held frequent consultations with the most eminent English physicians and surgeons; I know that most of these distinguished men, have visited France and there learnt the state of our medical science. I could not do better than imitate them; as a foreigner I visited

England, its hospitals and scientific institutions. In Dublin, and in Edimbourg I have been introduced, in each of these towns to the heads of the profession. Thus I have been enabled to study well the state of english medical science. I have met with constant kindness from the heads of the profession and I cannot pay a better hommage to the superior talent of the great masters of the art of healing than to quote their works. There is much to be learned in the able writings of the justly celebrated Brodie, Lawrence, Liston, Cooper, Sir James Clarke, Bell, Copeland, Bright, Marshall Hall, Ashwell, and many other eminent men with whose experience I have enriched my work.

Indeed, I shall always remember with pleasure the time passed in England and I hope never to be a stranger to the English.

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P. S. The *Rational Orthopedy* that I am preparing for my readers, is the expression of the highest acquirement of the English and French medical knowledge on spinal diseases. — It is not a belt, it is not a bed, it is a whole system the result of experience, of long and patient observation.

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Were we to judge the knowledge of medical men from the number of works written on spinal deviations, it might naturally be supposed, that the diseases of the spine are perfectly understood, and well attended; but observation shows all treatises on this subject to be nearly similar: the French have translated the English, the English have translated the French; the really good ore contained in this mass of works is considerably reduced, and scientific knowledge on spinal diseases remains very imperfect.

In England, Shaw, sir Charles Bell, both medical men of eminence, have written valuable works on

spinal deviations; these works are the more appreciated as not intended to advertise any particular establishment, but are in fact scientific. Few French can boast of similar advantages; most orthopedists who have written on spinal deviations, have been more or less influenced by some private views, by a desire to make known their establishment, in which a peculiar mode of treatment was adopted: in this case the opinion of the medical writer is invariably in favor of this treatment, for his establisment represents capital which would be lost or useless, were not its machines employed.

Such is human nature, the highest minds may be so influenced by interest, that the chief of an orthopedic institution, in which there are beds for EXTENSION, would not attempt to cure a spinal deviation without applying the rack: methods simple and effective would not be adopted; his peculiar apparatus must be used. How else would his capital be represented? The director of an orthopedic institution, in which PRESSURE is adopted, would not think of applying extension. The chief of a gymnasium considers that all deviations, even diseases of the spine, may be cured by gymnastics. The partizan of one system rails at the partizan of another; criticisms are mutual, yet there is good faith in each party; for the orthopedist who advocates extension believes in its efficacy, talks of its advantages so frequently that he deceives himself and others. To a mind thus dispo-

sed, nothing would bring conviction, and the advocate for extension will not even be induced to examine and consider the benefits that might result from any other practice, unless for the purpose of criticism. The same observation applies to pressure. To parents all the reasons advanced are new; unprepared and unable to distinguish truth among so many plausible opinions, these parents, notwithstanding their anxiety for the welfare of their children, place them, not in an establishment suited to their peculiar case, but to the first house in which they may by chance be introduced.

That spinal deviations may be cured by different methods, admit of no doubt : the want of success is too generally the fault of parents, who do not place their children under judicious care, but expect a cure from a method not adapted to the peculiarity of the case. The difference of treatment between pressure and extension, is so great that the same result cannot possibly be obtained. — Suppose for instance a youthful patient, having merely a slight deviation for which pressure, gymnastic exercises, or repose may suffice to effect a cure : it is a melancholy fact to acknowledge that if extension be used, the deviation will increase, and the general constitution will be debilitated. How much it is to be desired that the directors of these orthopedic institutions would decline receiving patients, who cannot possibly be benefitted by the treatment adopted ; un-

fortunately it is not so, for even in a common gymnasium, patients are received, the cure of a serious spinal complaint is attempted but does not succeed; mean while the time which should have been judiciously employed is lost, and the disease increased; parents suffer, disappointment follows disappointment; the art of the stay maker is then called forth to hide the deformity a well directed practice would have removed.

Whoever may be the parties applying to an orthopedic institution, unless belonging to the medical profession, they may be misled by the plausibility of the director of the establishment, who, as I have already observed, deceives himself as to the mode of cure, and then deceives the public.

How should it be otherwise: parents know nothing of the subject on which they seek advice: they anxiously listen to the opinions given, and are so desirous of their children's welfare that they gladly avail themselves of the promised relief. Parents also are much influenced by appearances. Orthopedic institutions are on a grand scale: the house is well furnished, the grounds extensive, the apparatus well displayed, and the proprietor has a scientific name; yet how few cures are effected? How many English young ladies brought to Paris, in the hope of a cure, return to their native country with all their deformity, merely because their cases were not understood, and the right treatment not employed? Are

these sad and unsatisfactory results the faults of science? Undoubtedy not; but the fault of parents, who, on their arrival in Paris, do not seek proper medical advice, and in the first instance, ascertain the real state of their children's health, and the treatment suited to their different cases.

Orthopedic institutions are in so expensive a scale, that the proprietors too often bend under their weight and are too glad to receive patients, whether the system followed, be or be not adapted to the particular deviation.

During fifteen years that I practised in London, I attribute my success to the independence of my situation; not being fettered by an establishment, or bound to any particular system, I applied to each patient the method best suited to the state of the youthful patient. Each method may produce a cure, provided the method employed be suited to the peculiar case. No treatment, however good in itself, can be indiscriminately applied to all cases; it would be as reasonable to expect that the same coat would fit every man, as to suppose the same method would suit every patient.

A common error from which evil must necessarily result is to consider a spinal deviation as of little or no consequence, as a mere indisposition a sort of bad habit either standing or sitting; for parents are generally speaking so well satisfied with their own flesh and blood, that they cannot

bring themselves to think there can be any thing wrong in their children's constitution; and yet man in marrying has paid little or no attention to the constitution of his wife, his mind having very often been more attentive to the state of her fortune. In civilised life, but little is done according to the laws of nature; social conventions are the chief objects of care; marriage is contracted without due regard to the physical state and condition of every party. Sickly children are brought into the world, to the great grief and astonishment of anxious parents. But, while intermarriages take place without regard to physical beauty, and physical constitution, the natural result must be expected. There is no just cause of complaint. It is not my province, in this work, to consider how to prevent the birth of sickly and delicate children, but when they are born to watch over their growth, and by scientific means to protect young plants, to consider if they deviate from a natural course, and to bring them to a normal and healthy state as gently and as efficiently as possible.

The *destiny of a child is to grow*. On the phenomenon of growth, health and happiness depend. An infant comes into the world merely sketched, nature and society continue the work. Neither animals nor vegetables attain any degree of perfection, if they receive a check during growth. Whether in infancy, childhood or youth, no human being re-

mains stationary. The human plant must grow and progress : it is the great law of nature ; if this law does not take its course, there is disease in the organisation.

The utmost watchfulness is therefore necessary on the part of nurses, parents, and governesses. Every thing that checks growth is pregnant with disease ; and yet how little attention has been paid to this serious subject. Intelligent men, fathers of families are better acquainted with what relates to dogs and horses, than to what relates to their own offspring ; even medical men have been guilty of parental negligence. In my treatise on " PHYSICAL EDUCATION, " I made growth the pivot of all that relates to Education and generalized my opinions by the proposition that *growth governs life.* This fact is so striking that we need only look back to the childhood of our friends, to account for their healthy or unhealthy state in later life. A woman who is sickly, weak, and delicate, whose existence in the midst of luxury is a burthen to her, in consequence of the physical pains and irregularities under which she labours, probably owes all her misery to early neglect, to convulsions during her infancy ; and parents have blindly sown the germs of the diseases that cause so much suffering. Sickly children generally become peevish and irritable, life for them has no pleasures, no comforts.

In illustration of the importance of growth, I have

only to observe how many infantile diseases are concomitant or subsequent to the phenomenon of teething; those who have not observed growth at any other period of life may however remember what a host of serious and mortal diseases accompany the developement of the teeth, and how often convulsions and death have been the result of a stoppage in the growth of the teeth. Dentition is marked by the existence of the most frightful diseases to which children are subject; it is during this period that death makes such dreadful havock among infants.

Growth is manifested by the progression and rapid advances made in the body at large and its various organs; but the growth of some organs placed out of sight, does not sufficiently attract the attention of parents or medical men.

In the phenomenon of growth, there are alternatives of activity and repose, but no cessation; the irregularities of these two alternatives constitute the dangers of growth.

When growth is sudden and rapid, the equilibrium of health is destroyed, and strength fails when it is most wanting. — The too rapid developement of any particular organ is generally made at the expence of the constitution.

If, for instance, the bones grow rapidly, the muscles are extended, and not having sufficient strength to maintain the equilibrium of the bones, the muscles are weakened and the body becomes deviated.

No part of the human frame suddenly attains full growth, every organ requires a certain time before its evolution is complete ; again, each portion of the organism is developed in turn, and the periods of improvement and decay have their weight and influence in other parts of the body.

No organ is isolated in the human frame ; if the teeth have so many connexions that any irregularity in their growth may shake the whole frame, cause convulsions and death, is it possible to suppose that other more important organs could be irregularly developed without causing a perturbation in the constitution.

The gradual developement of each part of the body in due order, free from pain or any other evil, constitutes normal growth. Irregularity of developement, sudden or low progress, is of more or less import, according to the connexion and alliance of an organ with other parts of the body : this irregularity constitutes anormal growth.

Before the celebrated naturalist Buffon, little was done to show the successive developement of man, that great naturalist confined his observations to yet one single case.

M. Quetelet of Brussels filled up that chasm, in the history of man ; from the hour of birth to the age of twenty, he has given the measure of the growth of boys and girls belonging to public schools, in Brussels.

The researches of this eminent philosopher show that the inhabitants of great cities are taller than peasants, and that in large towns growth is more rapid ; this is also the case where there is much wealth and comfort. Good food, good lodging, good clothing favour growth, while fatigue, labour, and want arrest the developement of man. According to the same author, orphans measured in the asylum of Brussels, who have passed their infancy in the country are shorter than the children of the rich brought up in large towns.

J.-W. Cowell has made similar observations in the manufacturing districts of Manchester and Stockport. But he remarks that during the progress of childhood to womanhood, when children are overworked, their growth is stopped.

Jules Guerin in his researches on Rachitism, has well expressed the cause of spinal deviations in youth, and has shown that the *elongation* of the vertebral column was principally affected from seven to fifteen. Quetelet, whose conscientious observations have great weight, has shown that the time of danger in youth was the progress from childhood to womanhood, and he has shown by irresistible and lamentable facts that life is never more uncertain than during this period. It is this particular time of life of which I intend to treat ; but instead of fixing my undivided attention on deviation or contortions of the spine, I am induced by the importance of the

subject, and the neglect of authors, to treat particularly of the diseases incidental to young people, more or less connected with the spine during the dangerous period of growth, and principally during the approach of womanhood.

If the constant study of any given subject be an advantage, I think my precedent works on physical, moral, and intellectual education give some weight to my opinion.

I have said that the supreme fonction of infancy and youth was growth; it is easy to infer that the diseases during growth are those which arrest its natural progress. All checks in growth may be attributed to two causes, that I consider as the most common and the most important.

Every living organisation presents these two principal elements : blood, and nerve. Blood is the material of growth, nerves seem to be its regulators. There is no real growth, no health, with an impure, debilitated or vitiated blood, or there is an irregular, anormal growth.

With a healthy nervous influence, there is full and healthy growth, with an imperfect influence of the nervous system, there is imperfect, or irregular growth; sometimes imperfect growth is the result of the alteration of the blood and of the alteration of the nervous fluid; but at all events the irregularities of growth may be understood and explained by the state of the blood, or by the state of the nervous system.

It seldom occurs that one of the two elements constituting life, that is, blood or nerves, are affected singly; their action is so intimate that it becomes difficult to understand which of the two elements has been first alterated; impoverishment of blood causes a check of growth and convulsions, while impression on the nerves causes convulsions and check of growth; however this may be, it is evident to all observers that blood is the sap producing the growth of the animal, and that the nerves are the conductors of that sap.

I must take leave to make use of a comparison that may serve to elucidate the phenomenon of growth.

The human frame is like a vase in which every thing is prepared for the Electrotype process. The solution of copper is represented by the blood; the wire attached to the plate of zinc represents the conductor or the nerves: if by accident one of the two active elements be arrested in its course, it is impossible that the electrotype should produce a proper figure. — Thus it is in the human vase. If the blood be poor, thin, watery, the whole body must suffer; if the nerves be in a morbid state, they are like a wire being a bad conductor.

Children are born either with good blood, and good nerves; or these two elements are tainted with impure alloy; hence the principal cause of regular, or irregular growth.

For contracting marriage, were parents to do for their offspring as for the trees of their garden, chil-

dren would probably be healthy, and their growth would not be arrested by any cause inherent in their constitution, but merely by accident.

It is well known in England, and perhaps better than elsewhere, that wheat must alternate with barley, and that foreign corn improves on british soil ; but the foreign corn sown on english ground is a chosen seed ; no inherent vice prevents its normal growth. — The progress of agriculture has shown that the seeds of plants that degenerate ought not to be employed for propagation, or they finally perish ; nor ought the sickly organisation of one tree to be grafted on another : or the sickly condition of the tree is constantly propagated, and it dies at last by the continual and noxious influence from within. Is it not the same case with animals ?

The degeneration of man is also perceived in families who intermarry ; any bodily or mental affliction which may happen to originate in one individual soon affects the offspring. This occurs most frequently among the rich who intermarry, and their mode of life not being conducive to bodily strength, it is quite natural that children should be born weak, and grow weak. — These observations must not be considered misplaced, as parents are too apt to attribute disease in their children to want of attention in nurses or governesses, while in fact the disease is in the constitution.

Parents may now desire to know the diseases inhe-

rited by children ; in medical language, these diseases termed morbid predispositions, or seeds of diseases, are in parents diseases of the blood, and diseases of the nerves.

Diseases of the blood contain : diseases of the solids : of the bones, — the muscles, — the glands, — the joints, —as also consumption, scrofula, diseases of the heart and of the circulation, dropsy, hemorrhagy, etc.

Diseases of the nerves comprize : convulsions in infancy, epilepsy in all ages, mania, hysterics, hypocondria. Here indeed, is a long catalogue of diseases for children. It is certainly not to be supposed that children have precisely the same disease as their parents, but as they have something of their likeness, yet not a perfect resemblance, so also may they have something of the parental disease. Without entering into a long enumeration of diseases generated by the parental constitution, how can parents, who have suffered from gout or rhumatism, suppose deviation of the spine of their children to be merely the result of bad attitudes? Why does it not occur to thinking minds, that children begotten by parents suffering from gout or rhumatism are liable to some weakness; and that the numerous bones that constitute the spine may be affected during the period of growth? How can nervous, delicate, and debilitated mothers wonder that their daughters should have fits of hysterics or depression

of mind? How can parents affected with malignant diseases be surprised to find morbid growth in their offspring?

These statements are not only meant to explain the existence of certain diseases, I have a higher aim: a child is not the produce of one single parent; if he has inherited morbid predispositions from one parent, he may possibly have inherited healthy predispositions from the other. The province of an able physician is to take advantage of the good seeds, in order to counteract the bad; to graft the treatment on the good, and thus endeavour to master the morbid tendencies.

In the treatment of diseases in children, the cause of disease is sadly neglected. A disease appears, suddenly, the same treatment is followed for all young patients, as though the only desire or object was to whitewash the malady.

Supposing health to represent a scale, an attempt is made to bring the lower scale to an equilibrium, but nothing is done to keep it steady nor to prevent its vacillating.

Growth being a state of constant change, may often cause disturbance in the equilibrium of health. Therefore I constantly advise parents to invigorate the healthy predispositions; but the task is by no means an easy one; it requires deep and peculiar study. The mind of a physician must have been trained to discover and understand the sources of the

disease. However elevated a man may be in the hierarchy of medical science, it is quite certain that he best knows that subject to which he has given the highest degree of attention. Who would dispute the high powers of conception and great acquirements of Sir Benjamin Brodie, or Sir James Clarke? yet were these gentlemen called to attend a patient afflicted with a disease with which they are not familiar, they will be found on a level with medical men, inferior to them in rank and fortune, but probably above them in that peculiar department. Far be it from me to question the talents of these justly celebrated men; but I would not apply to Sir James for an operation of the cataract, nor for an operation of the stone; nor to Sir Benjamin Brodie for a consumptive disease. Most medical men have what may be termed a favorite study; he who has devoted his time and attention to one particular subject must necessarily be best acquainted with it; in fixing on any given disease, he has followed the bent of his inclinations. — I do not find fault with the generality of physicians for not being conversant with the disorders incidental to growth, but I find fault with those who pretend to treat and cure diseases of youth, and I merely say that I do not know any medical man who has made growth the subject of his undivided attention and constant study; and as science and knowledge do not come unsought, I am warranted in supposing that little is known on di-

seases of growth more particularly, where the result of practice demonstrates ignorance.

The study of physical education, of races, of growth, and the subsequent study of causes of diseases in youth, will alone enable the medical observer to adopt suitable treatment, and insure a cure. What for instance can be expected of an orthopedist who supposes all spinal deviations to be the result of bad habits or awkward attitudes; while many spinal deviations result from weak constitution, in children born of rhumatic or gouty parents? How can a medical man attend properly to a spinal complaint resulting from the state of the nerves, if he be ignorant of the predispositions innate in the youthful patient? I shall prove by facts, that spinal complaints are by no means so simple, that any gymnastic or dancing master may attend and cure them.

CASE I.

In 1834, while practising in *London*, I was called to attend a young lady afflicted with a spinal complaint. Before applying to me, her parents had the advice of various medical men, some of high standing; one ordered gymnastic as a certain cure; another recommended reclining; a third, extension. I was then applied to, and I must admit that,

for some time, I was not more fortunate than my predecessors; but I had subjected my youthful patient to little inconvenience. I had only ordered stays that prevented the increase of the deviation, by supporting the upper part of the body. The patient frequently complained of pain in the dorsal vertebræ. I endeavoured to alleviate that pain. Sometimes I succeeded, sometimes not. I continued to attend this young lady, who was nearly seventeen, and the constitutional change that characterizes womanhood had not taken place. During one of my visits, I was accidentally introduced to the young patient's grandmother. That lady was suffering the tortures of gout; all her fingers were distorted and stiff. The articulations or joints were swollen, and painful. I ventured to make a few enquiries, in reply to which the lady said her father had suffered from gout, and she thought the malady hereditary in her family. The father of my young patient was free from gout. For the first time, it occurred to me that the suffering of this young lady might be the result of hereditary predispositions. Instead therefore of merely giving my attention to a deviated spine and applying gymnastic and orthopedy, I made the patient follow a regular course of treatment. In a few weeks, the constitutional change took place, the pains in the dorsal vertebræ disappeared, and the deviation attributed to bad attitudes and bad habits gradually decreased.

When this young lady was twenty, she was perfectly straight.

CASE II.

In 1835, the youthful daugther of an Irish baronet was placed under my care. She was afflicted with a spinal deviation; my mind was already fixed on the good resulting from seeking the knowledge of the cause of the disease. I consequently made many inquiries as to the health of the parents; to them I may have appeared unusually and unnecessarily inquisitive; and most unsatisfactory and incomplete answers were given. I attended this young lady for a spinal deviation according to the general practice of orthopedists; having had numerous opportunities of being acquainted with the means employed, I had at command an arsenal of machines. I had not then arrived to the conclusion, that the most complicated things were not the best, and the more simple a machine, the more easy is it to understand its effects. Time passed on, but little progress was made towards a cure; the young lady was pale, the joints large; sometimes she complained of pains in her bones, and she pointed one day a bone, another day another bone. I then begged to be introduced to the father of my young patient,

in order that I might speak freely with him. He told me his family and himself had been frequently suffering from exostosis, or partial enlargement of the bones. This acknowledgement sufficed to enligthen me, and was useful to my practice. I still attended the young lady and acted according to the knowledge I had acquired. I had then the gratification of seeing her improve daily. She has since married, and is in excellent health.

CASE III.

A lady of rank, very anxious for tbe welfare of her children, having read my Treatise on PHYSICAL EDUCATION, requested me to attend her family. The eldest had a spinal deviation, and suffered from swelling of the glands of the neck; three incisions had been made and most unjudiciously kept open. I attended but little to the spinal deviation, the sores were on the left side of the neck; I thought the young lady had perhaps become deviated through the instinctive movement which led her to lean more on one side than on the other, in order as much as possible to avoid pain. I induced my young patient to take a nauseous medicine (*oleum jecoris aselli*), which had proved of essential service in all strumous diseases. My efforts to obtain a cure were

crowned with complete success : without any orthopedic apparatus, the spine became straight, as soon as the sores in the neck were healed and the pain had ceased ; the constitution was strengthened ; the young lady, improved daily and is now one of the greatest ornaments of the court of queen Victoria. In the case here related, what would have been the result of traction, pressure, or gymnastics?

It may perhaps be remarked that I allude only to the nobility, and it may be considered as vain, glorious ; yet this is by no means the case; but in England the aristocracy and the well educated who have travelled, have not against foreign physicians the prejudices common to the inferior classes, who believe that the English alone can effect a cure. One of the richest men in London, who I am proud to number among my patients, several times assured me that he gladly sought my advice for himself, but that he could not possibly ask me to attend his household. With feeling of deep gratitude, I must confess I never met with any thing like prejudice among the learned, nor among the higher classes of society. It is certainly among the aristocracy and among the well educated, that foreigners in England find support, and are duly appreciated; among the lower classes, foreigners meet only, as every where else, with undisguised prejudice.

It was necessary for me to enter into this explanation, as few cases among common people came unto

my notice. All foreign physicians who, like me, have lived and practiced in London, have invariably found support among the aristocracy and among the heads of the profession, but less among the middling classes.

CASE IV.

The wife of a citizen being on a visit to some friends, allowed a medical student who was of the party to inoculate her little girl, who was then nearly six years of age. On her return home, she thought she had done wrong, and she became alarmed. To prevent the effect of inoculation she sent for some caustic, and applied it on the sore arm. Some days passed and the child did not appear to suffer from the inoculation. The mother knew not with what her child had been inoculated. I was equally ignorant on the subject; but ten days later, there appeared a swelling of one of the glands of the neck; the gland being isolated showed all the appearance of scrophulous swelling. In what manner the inoculation had produced that swelling could not be explained, unless the inoculation had caused a manifestation of the *strumous* predisposition. I ordered cauterisation of the gland and regular treatment for *scrophula*, but I had scarcely pronounced the words :

hereditary disease, when the citizen became angry. This worthy man said he could vouch for the purity of the blood of his ancestors during the last three hundred years, and the poor suffering child was left to nature and to chance. Yet the mother was consumptive and belonged to a family in which consumption was prevalent; but the citizen, who was almost a dwarf, pretended that his good blood had corrected the blood of his wife. I ceased to visit the infant invalid, and afterwards learnt it had tubercules in the chest. Were it possible to avert the fate of the child? The citizen having it in his power to vouch for the purity of his blood during three hundred years, the object was to eradicate the evil seeds the child inherited from the mother.

It is strange, though true, that no Englishman will admit the impurity of his blood. — Englishmen fancy they have the purest blood in the world; in spite of the statistical returns, which prove that there is no country in the world where the blood is more contaminated by tuberculous and strumous diseases than in England, yet will they pretend the contrary.

I was called to attend the niece of a Duchess. The father of this young lady had all his life laboured under various complaints of a strumous nature; he was deaf, had sores on his legs and feet; in fact, he was a living proof of the degene-

racy of blood, the result of intermarriage. This gentleman's daughter was also deaf: she was deviated; the whole glandular system was swollen; her skin was white and puffy; her legs frequently œdematous. The mother was also an invalid; for many years she had been reclining on a couch. Being at that time a stranger in London, and unacquainted with the english prejudices, I unfortunately made use of the word *scrofula*. The mother was irritated; she called in Sir Henry Halford, but the wairy courtier knew his country too well to fall into the same error. Sir Henry Halford said the young lady's complaint merely arose from the circumstance of the white lymphatic vessels being larger than the veinous and arterial ones; the medical man who had pronounced the disease to be scrofula was probably a young physician, who knew little of the noble blood of England!! Yet Sir Henry Halford's opinion was exactly the same as mine: scrofula or strumous predisposition being in fact the predominence of white lymphatic vessels over blood vessels. But Sir Henry Halford was a man of the world; he respected the prejudices of his country, and carefully avoided the words displeasing to a parent's ear. But in pleasing to the mother, difficulties arise; Sir Henry Halford did not prescribe for the young lady according to her case: he received double fees during six months, after

which the glands of the neck burst, and my attendance was again required.

However great may be the feeling of pride, surely it must be acknowledged that if the aristocracy inherit of the noble feeling and moral qualities of their ancestors, it may also be supposed they inherit of the physical constitution of their parents, unless it can be proved that the rich, and the aristocracy are freed from the pain, to which human nature is subjected. A consciencious physican must act according to the dictates of science, not according to any prejudices.

Scientific men, who have given most attention to hereditary diseases, are of opinion that children, who more resemble their parents, are those who more fully inherit the parental constitution.

Boerhave relates the case of a family in which all the different members became yellow, from disease of the liver at the same age. It is well known that young people, when they reach the period of constitutional change, generally suffer the same pains as their mother.

Zacutus Lusitanus relates the case of a father who was epileptic; he had eight children : all died of epilepsy. Boerhave made similar observations; were it necessary, I could fill a volume with cases of the same description. If I insist on the importance of predispositions or of hereditary constitutions, it is because this knowledge is of the greatest

practical importance. When attending a child, for any given disease, if the disease does not yield to the usual mode of treatment, it is certain that it is due to heredity; the disease is adherent to the fibre of the organisation and cannot be speedily rooted out, but by injuring the constitution. In my work on physical education, I have insisted on the necessity of improving children's constitution during growth; I have said that during growth, evil predispositions might be counteracted, good ones developed, and it is only in youth that this human graft can be effected; it is because medical men have overlooked the tenacity of hereditary dispositions, that they have so often failed to cure disease. There is but little chance of cure, without the knowledge of the cause : the physician who prescribes by chance, if he effects a cure, it is only a chance.

It cannot be too frequently repeated that in the treatment of diseases incidental to youth, if the great phenomena of that age be overlooked, it is almost impossible to understand and cure these diseases. I have shown that spinal complaints were not always the result of bad attitudes, I shall again return to this subject, and prove by numerous facts, that the catalogue of diseases caused by the state of the spine in growth is much greater than is generally supposed.

I am deeply impressed with the importance of at-

tention to the phenomenon of growth ; it is a well known fact that when an organ is in its full developement, or in the period of its evolution, the diseases of that organ and of the organs related to it make their appearance. Is it not during teething that children suffer, not only from pains in the gums, but from other diseases connected with the nervous system? It is well known that during teething, children are subject to convulsions, to fits, to diarrhea. I have said that no organ in the human frame is isolated, so that the slightest irregularity in growth is linked with irregularity in other parts of the body; and although a knowledge of the hereditary constitution is peculiarly necessary to understand the probable irregularity of growth, yet it is in relation to the phenomena of growth that all the diseases of youth must be classed.

" Most of the complaints with which children are afflicted, " says Dr Ashburner, " are dependent on central or nervous irritation ; the various symptoms of which are parts of the disease called hydrocephalus acutus, or water in thebrain." Let us now consider the different manifestations of this nervous centre.

In convulsive children, the start in the sleep, moaning, shivering fits, flushing of the countenance, drowsiness, heat of the skin, perspiration, nevralgia, spasmodic twitchings of certain muscles, squeenting, wry neck, lokjaw, spasmodic croup, chorea, epilepsy, catalepsy, and its minor degrees, forgetful-

ness, nervousness, stammering, tetanos and coma; diarrhea and costiveness, deafness and amaurotic blindness, are part of hydrocephalus. All these symptoms, in a slighter or in a severe degree, are coincident with anormal dentition.

I do not pretend to say that these symptoms are produced by the anormal developement of a tooth; but I state, what is warranted by experience, that these symptoms are particularly manifest during the epoch of dentition. It is not my province to seek or to explain the part of the tooth in producing all these symptoms, no more than to explain how a thorn in the finger can cause a lokjaw; it is sufficent for the subject I treat, to show that during growth, there are coincident events connected with it; and if while the teeth grow, so many diseases make their appearance, and endanger life; how can it be expected that during the elongation of the medulla elongata, and the growth of the vertebral bones, no disturbance, no trouble, no irregularity should occur? Orthopedists have considered the spine as a stick that is curved, as though the spine of the human body had no nerves, no blood, no vessels, no muscles, no cartilages; there is a deviation of the spine, in common practice, extension, and pressure have had recourse to; hence the frequent disappointment in cases of spinal complaints.

The treatment of spinal deviations is by no means simple and easy; it is not possible to stretch the

spine without danger. The spine is not as an isolated tree. The spine is not only the support of the head, of the chest, of the superior limbs, but the spine supports the heart, the lungs, the bowels, the liver, the spleen and other excretive organs; every alteration of the spine affects more or less the different parts with which it is connected; the spine also affects the nerves which communicate sensation and motion to all the internal organs.

That the uncultivated or ignorants men, indifferent to the progress of science should think the spine can be compared to an ark that may be bent in a given direction, is by no means extraordinary; for the unlearned suppose every thing possible. But that medical men of any standing, of any real knowledge should admit of pressure or traction as if the spine, or if the vertebral column was isolated seems difficult to understand. Common sense shows that the main support of so many important organs that contains the elongation of the brain deserves more attention.

How can medical men forget that all the spinal nerves affected have an influence on the head, the stomach, the lungs, and on the superior limbs; how can they be ignorant of this fact, that pressure or traction of the spinal nerves, of the cervical and dorsal vertebræ are followed by pains in the stomach, pyrosis, palpitation of the heart, oppression.

How often have superficial observers vainly at-

tended an obstinate cough, supposed to be the result of cold, when in reality it was the result of the morbid sensibility or tenderness of the vertebræ. The pains in the abdomen, in the loins, in the hips, pains so common to young girls during growth, are generally the result of the morbid state of the lumbar vertebræ, and of the nerves. Costiveness and absence of the natural constitutional change are frequently caused by the state of the lumbar spinal nerves; indeed, the association of nerves all over the body is so extensive, that it is often very difficult to ascertain which set of irritated nerves induces convulsions, hysteria, epilepsy, hypocondria.

Professionnal men, aware that nerves form an extensive net in the human body, that these nerves are connected by numerous links; so that, if not impossible, it could at least be difficult to have an isolated influence on any particular nerve, must understand that the pressure or traction of the spinal nerves cannot be so harmles as the orthopedist supposes, when he acts on the spinal column, as though it were a rod or stick, as if there were no nerves, no vessels, no ligaments.

The growth of the teeth being one of those phenomena that parents most constantly watch, may at least prove to superficial observers a specimen of the irregularities and disorder occasioned by the growth of other bones.

I must again revert to growth as the guide of

health in youth, as a key to the knowledge of diseases of growth as well as of their treatment. When growth is sudden and too rapid, one particular organ may predominate, and be too forward, while others are backward. The equilibrium of health is thus destroyed, strength is wanting, either to resist the morbid internal predispositions, or the external influences; the conformation becomes defective and the foundation of organic disease is laid.

In some cases, complete atony takes place in one system, while others are progressing : if the bones grow rapidly, the muscles are drawn; but not being strong enough to keep pace with the rapid progress, the vertebral column wants support and is left to chance; it is then that every bad attitude may have an evil result, and be followed by a deviation. This peculiar state happens in all diseases of youth, particularly if young people are obliged to remain in bed; for while the bones grow the muscles remain inactive. The most common observer is aware that if children remain a week or two in bed, even for a trifling indisposition, they appear taller when they get up, and in fact they have grown. Experience proves that even if a man of robust constitution has the misfortune to break one of his limbs, though he be confined but a month or six weeks, that time suffices for the muscular system to waste away, and when the patient begins to move, he feels weak, unable to stand; but if growth

be not completed, if the bones be not *ossified*, through the effect of attitudes a deviation would ensue.

In some orthopedic establishments, the treatment of spinal deviations is entirely based on the reclining system, to which is added traction by the head and feet; so that the evil naturally resulting when young people are compelled to be in bed on account of indisposition, that is the developement of the bones, and the weakening of the muscles by elongation and immobility, is effected by the practice of medical men, who pretend to cure. I have seen many cases illustrative of this evil, and I shall only relate one, as being sufficient to show the bad effects of traction.

CASE V.

I was called in consultation by Dr Kerrison, an able physician still practising in London. This benevolent and eminent man, had paid little attention to the deviations of the spine. Having read some of my observations on spinal complaints, Dr Kerrison requested I might be consulted as to the state of a youth, who had been long under treatment for a spinal deviation. I met Dr Kerrison by appointment, and we saw the patient, a young man of

seventeen : he was in bed ; he said he could nèither stand nor walk. His length and emaciation struck me ; the youth looked as though he had been passed through a flatter : his chest was flat, his stomach flat ; the only parts of the body which had retained their natural shape, were the arms, and the contrast was really strange : the arms were round, though thin, while the legs were as sticks ; the knee joint itself was flattened anteriorly, but the interior of the knee, what in medical language is termed *condiles*, were overgrown ; the *internal tuberosities* of the lower part of the femur projected so far, that when the patient was lying down, the two legs left naturally, the internal *condiles* met. The same remark was applicable to the internal tuberosity of the tibia. As to the *patella*, which is of a round shape and which gives the round appearance to the knee when it is bent, the *patella* had become flattened, very thin, and on pressure, it appeared like a small bean between the four tuberosities of the femur and the tibia. The remarks I made on the articulation of the femur and tibia were applicable to the articulation or joints of the foot. The tarsal and metatarsal bones appeared disjointed, and like the bones of a skeleton whose ligaments are loose or cut.

We turned the youth on his stomach to look at the spinal column, and there we saw what we had al-

ready remarked, in the articulations. Nearly all the vertebræ were loose, appeared disjointed, and unconnected. The young man was unable to sit, or stand. The extension the youth had undergone, was almost cruel ; I was induced to auscult the state of the heart, and this organ was in a state of hypertrophy , or rather in an anevrismal state. The imprudent quack who had applied traction to this youth had developed a more frightful malady than any deviation of the spine. Both Dr Kerrisson and myself wondered the boy was still alive. His constitution must have been very strong to bear the torture that lasted two years.

I must confess that when the youth was lying in bed, he appeared perfectly straight, but so is a corpse when stretched in a coffin. I desired the boy to be taken out of bed, in order that I might see him standing ; his parents, and attendants scarcely dared touch him. He complained, on the least motion, of palpitation of the heart and of suffocation. The servants seemed as much alarmed as though they had had to move a body of glass. With great gentleness and patience, two strong domestics lifted up the young patient; we then observed that the joints of the knee and ankle, the vertebral column could not support the chest, the arms, the head ; the hips could not support the vertebral column, the legs and feet could not support the body ; so that, had the youth not been supported by servants, he would have fallen;

nor can it be said what shape he would have had.

All these sad effects resulted from traction and extension on orthopedic beds.

Dr Kerrisson requested me to take the entire management and responsibility of the case; he approved of the treatment, I proposed. He was the physician of the family, and kindly promised to call as a friend and see the result of my care.

Independently of the peculiar debility, the patient occasionally complained of pains in different parts of the body : which pains the parents attributed to rheumatism. This youth laboured under dyspepsia, palpitation of the heart and constipation, he had frequent fits of coughing for which they could not account, as he was always in a warm room, constantly watched by an attentive nurse.

Had any one wished to try the effect of extension, and traction without causing death, there could have been no better case. It is related that an enthusiastic painter, not exactly in his senses, put a man to the torture to obtain the expression of real sufferings. The hard hearted individual, who for the sake of gain, and not for the interests of science, stretched this poor youth on a rack, unknowingly rendered a service to science, and by the effect of his pratice exposed various secrets of the human organisation.

I acted towards this youth exactly as I should have done, had Gaspar Hauser fallen into my hands.

A better subject for the application of my opinions on physical education could not be met with, and I cannot find words to describe the interest I took in this afflicted patient. Indeed, this interest could only be understood by those engaged in the solution of an intricate and very important problem. While attending this lad, my heart as a man was gratified, my mind as a physician was satisfied. I had devoted much time, deep and constant study to physical education, and I rejoiced to see the good effects my labours were likely to produce.

I commenced the treatment by restoring the stomach to its normal state; I then gave my attention to the heart, to the bowels, to the spinal column; then to the joints. In the first instance, I adopted a general treatment; in the next a special one. The general treatment was to give flesh to this living shadow, to restore the principal functions, to quiet the heart, to regulate the bowels. Each time I had the pleasure of meeting Dr Kerrison, I found the most flattering encouragement; I could not here describe my plan without enlarging too much on the subject; but six months after attending this youth, I sent him to Hampstead to strengthen his constitution and to benefit from the fresh air; Dr Kerrison and I saw him running freely on the heath.

I must admit that the success of my attendance went beyond my expectation, but the same good

constitution that had borne up against the cruel extension was of service, when my attendance was in conformity with the kind and benevolent laws of nature.

Dr Kerrison, whose residence is in Burlington Street, London, has always been kind enough to answer any questions relative to this case, and I am happy to have insured the approbation of so eminent and so good a man. This youth has now recovered; he is still slightly deviated; but he is happy : his parents satisfied, preferring their child with a slight deviation, able to enjoy life and its comforts, to a constant invalid stretched on a bed of misery. I must not omit to state that the general health has been fully restored. There are no longer palpitations of the heart, dyspepsia, erratic pains, costiveness; the disease appeared set at defiance, and my patient is now a full grown man engaged in the general pursuits of life.

How many interesting lessons this case affords, and how correct I was, when in the second edition of my PHYSICAL EDUCATION, published in 1838, I said : " The characteristic of sudden growth is to become " tall and thin; the joints are large; fluids accu- " mulate, and with the atony of the whole economy " give rise to those lymphatic diseases so fraught " with danger in early life. When growth is out " of proportion, the functions do not proceed " regularly; nature seems exhausted with the pre- " carious efforts she has made, and her course

" seems arrested; general languor ensues, the " time for puberty arrives, but does not take place; " and the blood rushing to the chest, the lungs, " and heart, causes those palpitations, pulmonary " and other affections, which if not mortal are " greatly detrimental to youth. "

Galen said " that health was symetry; " it is because this symetry is not maintained during growth that disease occurs. Symetry is destroyed by sudden growth; the joints are large and out of proportion. Sudden growth is frequent after an illness, and after illness there is weakness of the whole frame.

When growth is slow and gradual, it adds vigour to the constitution, density to the tissues, and enables them to bear the increase they have to undergo. The bones and muscles seem to keep pace, the sanguine system seems to predominate over the lymphatic and engenders strength, vivacity, liveliness; all functions are regular, the whole economy is in equilibrium; while sudden growth is attended with pain in the joints, general languor, followed sometimes by serious illness, children whose growth is normal, merely complain of stiffness in the limbs; but there is no disorder, no disease.

Merely to consider the important phenomenon of growth in relation to bones, and muscles, would be to view it in a narrow light. Growth extends to all organs; nerves grow, blood vessels grow, all

the internal organs grow, though they cannot be measured by the inch or the yard.

If there be irregularity in the growth of the bones and muscles. There is also irregularity of the other tissues, and it is because this fact has remained unnoticed, that spinal diseases have not been judiciously attended nor cured.

CASE VI.

A young lady nearly sixteen caught cold ; she was attended as usual in similar cases. The cough became obstinate, and troublesome, the slightest fatigue, merely going up stairs, or moving quickly, was followed by palpitations and difficulty of breathing ; the pulse was high, from 100 to 120.

The persistance of the cough, perspiration at night followed by extreme debility, led the medical attendant to consider his patient consumptive, and the climate of Nice was recommended.

I was called to see this young lady : the constitutional change had not taken place, she complained of head-ache, was costive, and it occured to me this was a case of *stopped growth*, not of the bones nor muscles, but of the nerves of the spinal column. I requested the young lady might be undressed that I might be allowed to examine the spine : it was, but slightly deviated ; there was however a sensibility

under the finger in nearly all the cervical and in some of the lumbar vertebræ.

I attended this young lady regularly for stopped growth; in less than three months, the cough had disappeared, the pain in the spinal vertebræ was gone, the costiveness was cured, the constitutional change had taken place. There was in every way marked improvement : the consumptive and emaciated appearance vanished without recourse to the climate of Nice.

Cases of *false* consumption are more common than is generally supposed; it is because medical men lose sight of the importance of the spinal nerves; and have not studied the phenomena of growth that they are so easily led into error.

Growth, in some instances, appears arrested; if it be commonly observed that the stoppage of the growth of the teeth keeps all the economy backward, why not acknowledge that the full growth of the spinal column may have at least similar effects?

Neither parents nor medical men are sufficiently aware of the influence of physical agents on health and on growth. It is known that plants in the damp do not flourish, that they are blighted by cold, that they become etiolated; it is also known that a sudden change of temperature withers all buds and flowers. But it is not sufficiently known that cold, damp, want of light can blight and wither the human bud or the human flower.

My friend Dr Fourcault, in his ingenious researches on phtysis, has pointed out the fatal effects of cold ; not only may cold stop growth, but it may produce the strumous and tuberculous cachexia, in other words consumption.

Dr Ashwell relates the following case.

CASE VII.

April 1, 1838. Miss B., æt. 19, of light complexion, delicate from infancy, and frequently suffering from amenorrhea, was exposed, in September 1837, to a cold, damp atmosphere. The result has been entire suppression of menstruation, with its accompanying inconveniences, and severe cough. The aspect is entirely chlorotic, the skin being dirty-white, the conjunctivæ, gums, and lining membrane of the mouth are bloodless, nor is there one indication of the malady absent.

The expectoration, which is occasionally purulent, the pain in the left side, the morning perspiration, and the emaciation, point very clearly to phtysis. There is also considerable leucorrhea. The progress of this case has been instructive : at first the amenorrhea did not attract attention, because it was unattended by important indisposition. But, in December 1837, some more serious symptoms showed themselves : the chlorosis was fully esta-

blished ; cough, and quick pulse, with the icterode hue and gradual emaciation, alarmed her medical attendants, who had carefully watched and treated her. Since this period, it is unnecessary to detail the course of the disease ; but it is sufficient to add, that menstruation was never restored, tubercular cavities formed in the substance of the lung, and destroyed the patient in October 1838.

Many similar examples I could furnish, scarcely a year passing without my seeing several such melancoly cases. I forbear offering many remarks on the treatment of this most fatal complication, having already insisted upon the absolute necessity of continued vigilance and care.

Youth is frequently affected with various pains that have been called pains of growth.

" Pains in the joints and limbs are always felt when growth is rapid, " says Buffon, and that naturalist observes that it is not only the case with rickety children, but with all growing persons who have their joints distended. In what are termed growing pains, there is neither swelling nor inflammation. The knees are first affected, then the hips , the elbows and the wrists ; these pains seldom last more than a week. Some professional men, strangers to the phenomena of growth, have erroneously put leeches on the suffering parts , or have attended children for rheumatic pains to the detriment of their health.

I think it may be said there is a fever of growth, a kind of febricula, when I observe how similar is the phenomenon of growth to that of adhesive inflammation, there is undoubtedly some analogy between inflammation and growth.

Growing pains require no theurapeutic means, but they are useful monitors, as to the health of young people. In this stage of life, let a rational system of physical education be adopted; regular and gentle exercices, over fatigue either of mind or body, suffice to engender a morbid state of some part of the body, for if there be any weak and irritable organ in the constitution, it becomes more than usually susceptible during a crisis of growth and it might become the seat of disease.

EPILEPSY DURING GROWTH.

Epilepsy is a disease common in youth. Dr Marshall Hall who has made the spinal marrow the object of his studies and of his discoveries, has proved that epylepsy is a disease of the true spinal system, originating at a distance from the spinal centres. Although the distance which separates hysteria from epilepsy is very great, he shows how similar are the symptoms of those two diseases. Epilepsy is a disease incidental to growth and is

frequent during youth The more common periods for its invasion are about seven or eight years of age, or during the second dentition, and shortly before and for a few years subsequent to puberty. That epilepsy is connected with growth is easy to infer, when very often epilepsy disappears after a crisis of growth or after the constitutional change s effected in girls.

Between the age of puberty and that of full growth, says Dr Mansford a state of plethora is often produced leading to many general and local disorders, among which pulmonary consumption, epilepsy and hemorrhages from the lungs are the most frequent; during the whole period of growth, from infancy to adult age, the supplies exceed the waste of the system; the excess of the first been applied to the extension of the body, in a healthy and well regulated system, these process are nicely organised. But it sometimes happens, and especially during the interval above mentioned, that the vital action run too high, and the balance is lost; nature seems in haste to finish her work and to produce a perfect animal; and the result of such a condition is a state of plethora, and even a tension of approaching mischief arising out of this state are often discoverable, and consist in fugitive pains, headaches, giddiness, bleeding at the nose, etc. If these premonitory symptoms are overlooked or disregarded, some more defined form of disease may generally

be anticipated, one of frequent occurrence is epilepsy.

CASE VIII.

A young man 18 years old, of large and robust stature, after showing repeated signs of *rapid growth*, pains in the head and chest, bleeding at the nose, occasional attacks of hemoptysis, noises in the head with momentary loss of recollection and of speech, was finally attacked with epilepsy in its worse form. The paroxisms were generally in the night, and occurred sometimes once, sometimes twice in the week; sometimes once a fortnight, the longest interval being a month; besides which he had frequent lesser attacks in the day which deprived him for a time of motion and speech. The second month of treatment, all the symptoms subsided, the noises in the head and the daily attacks entirely left him. After passing six weeks without any attack, he became impatient to return home. He had two returns of the disease at different intervals, subsequently the parents announced that the cure was confirmed.

It is worthy of remark that the treatments that have had more effect on patients are generally those directed against a morbid state of spinal marrow, or those in which a crisis of growth complete the evolution of an organ.

CASE IX.

Anne Kyfield aged four and twenty, in whom the constitutional change had not appeared, but who was otherwise in good health, was subject for twelve months to epileptic fits. The fits usually occurred about once or twice a week, occasionnally two or three times in the same day, seldom lasting long, but coming and going so suddenly, that she had no consciousness of the attacks until made aware of it by her friends. When the fits commenced, she was affected by convulsive movements of the left arm and leg.

Dr Griffith suspected an affection of the cervical vertebræ, and in pressing on them, he discovered a cervical tenderness of that part of the spine. The treatment he adopted was obvious and in relation to the plethoric habits of the patient; she was relieved at first, and cured when the pain in the cervical vertebræ disappeared.

Dr Ashburner, who has written a very valuable work on dentition, and who has paid the greatest attention to the phenomenon of growth during teething, has brought forward many interesting cases, in which epilepsy was the result of a check in the growth of the teeth.

Dr Duchamp relates many cases of epilepsy he considers brought on by the crisis of growth.

CASE X.

A man twenty six years old was subject to epileptic fits; since the age of sixteen he had several crisis of growth. He suffered from headaches which disappeared when bleeding at the nose occurred. When the nasal hemorrhagy ceased, the epileptic fits began; he was properly attended; medical depletion produced the same effect as bleeding at the nose; and a cure was effected. Had he been neglected, it is probable the disease would have taken root, and later on, nothing would have removed it.

S^{t} Vitus' Dance is a disease frequently met in the irregularities of growth.

CASE XI.

S^{t} VITUS' DANCE OR CHOREA.

A child of twelve years old was attacked by chorea, in consequence of the suppression of an habitual hemorrhagy from the nose and after a strong *crisis of sudden growth*. His teeth were decayed, and at twelve years old, he only began his second dentition. This poor child grew thin, tall, and sickly; having no medical attendance, he was left in a state of imbecillity brought on by the frequent fits of chorea. Epilepsy is common to children and young

people; it often coincides with some crisis of growth. As if nature would indicate that epileptic fits are but the produce of stopped growth, observation proves that epilepsy often disappears when growth is fully developed.

It must be remarked that epilepsy is more frequent in the plethoric young people than in others. A knowledge of this circumstance is essentially useful in the treatment.

Among hereditary diseases, none perhaps are more constantly met than those belonging to the glandular system. Where a father has the tonsils enlarged, the children generally have something of the kind. And it is not uncommon to find that children, in a crisis of growth, are more or less affected by the swelling of those hereditary glands, without being in reality of a strumous nature.

A peculiarity in hereditary diseases is, that they appear generally at the same period of life in which parents were affected. When parents during childhood were subject to convulsions, their children very often labour under similar complaints; but in glandular diseases, the heredity is very marked. Swelling of the glands in parents are common also to their children; the slightest cold suffices to produce that effect.

Again I say with D^{r} Palmer, medical men too easily forget the importance of the spinal marrow. If the spinal marrow be deeply injured or divided, all

sensibility to external impressions, and the power of voluntary motion are instantly lost in those members or parts which are supplied with nerves given off by the spinal chord below the seat of injury. Thus palsy of the lower limbs, of the lower intestines, or of the upper portion of the intestinal canal, will result in proportion to the higher site of the injury of the spinal marrow.

The brain and spinal marrow are protected from external injury by the hand of creative Wisdom, with precautions to which no parallel is observed in the covering or defence of other organs. They are completely and strongly encased in bone.

Closely allied in function as in structure, forming a continuation of the same mass, and constituting in fact, one organ or system of organs, the brain and spinal marrow intimately and exquisitively sympathise with each other in their morbid affections. Thus in disease of the brain, it is common to hear complaints of pain extending along the course of the spine and of the larger nerves; of tingling dumbness, and unvoluntary startings of the extremities, and to observe partial and general convulsions; — while inflammation or congestion of the spinal chord, however induced, is frequently complicated with headache, ringing in the ears, giddiness, violent pulsations of the temporal or carotid arteries, stupor or delirium and all the other symptoms indicating the extension of the spinal irritation to

the brain. Neither of these can be long or severely affected, but the other more or less promptly sympathises with it; as the substance and membrane of the brain may be the seat of congestion, inflammation and their various morbid consequences, without increased sensibility, enlargement or other alteration of the bones of the skull, so, different diseases of the spinal marrow may exist, and proceed to their fatal termination, unaccompanied by unnatural tenderness, projection, or other appreciable change of the bony rings or vertebræ, forming the cavity in which the organ is contained.

This truth cannot be too deeply impressed on the observer's mind. So common indeed is the source of error that men of great professional talent and experience have been known confidently to deny the existence of disease in the spinal marrow, because on examination, they could detect no morbid condition in the bones by which it is enclosed. — What would be thought of a practitioner, who should avow his disbelief in the existence of an affection of the brain, because the bones of the skull exhibited none of the characters of morbid action? What would be thought of a medical man, who should deny a headache, because, the skull should not be painful on pression?

If inflammation of the brain and spinal marrow is commonly signalised by a train of external phenomena, and attended with consequences so formi-

dable, that the experienced practitioner can find no difficulty in recognising its presence, and deciding upon its nature, yet it must be admitted that there are some *chronic* affections of both organs, which exist in a form so insidious or assume characters so varying or equivocal, as to chide the scrutiny of the most vigilant physician, or frustrate every attempt at correct diagnosis, if his attention has not been previously and powerfully excited to this obscure tribe of cerebral diseases.

In females, at an early age (principally during growth), and especially in those of feeble and delicate constitution, pain about the convexity of the sixth or seventh rib, frequently form a most obstinate and distressing symptom; it is usually, yet not invariably, seated in the left side. In general, it is dull, wearying, confined to a small spot, and distinctly circumscribed, but is subject to paroxyms of such acuteness and severity, as to assume an aspect very strongly resembling that of nevralgia or tic douloureux; and without doubt, as closely allied to it in origin as in character. During the violence of these paroxisms, the pain sometimes strikes upwards in the direction of the breast bone and shoulder; and a sense of numbness, of tingling and loss of power are felt in the corresponding arm; long preservation of the erect posture, fatigue, grief; anxiety and all the depressing agents, and ingestion of food, particularly in a solid state, are constantly

followed by aggravation of pain; cough or difficulty of breathing, forming a dangerous complication, are sometimes connected with it.

Females that sedentary pursuits or domestic occupations deprive of the invigorating influence of air and exercice, most frequently suffer from this intercostal pain; headache, depression of spirits, debility and lassitude of the muscular system, weakness of the pulse, tremor or palpitation of the heart, wearying pains and coldness of the extremities, constitutes its ordinary, and excessive torpor of the bowels, one of its invariable attendants.

Occasionally aphonia or loss of voice is not, as usually thought, induced by exposure to humidity or cold; but is obviously connected with spinal irritation; it may be regarded as dependent, for its immediate production, on a morbid state of the inferior laryngeal or recurrent nerves, which are exclusively distributed to the organ of voice. Fatigue or the agitating or depressing passions will suffice to excite it, in a system predisposed to its occurrence. Once set up, it may be sustained or aggravated by atmospheric or intestinal causes.

Another disease which may be most aptly selected as illustrative of the insidious nature of cerebral and spinal irritation, has acquired a great ascendency in England. Keeping pace with the rapid progress of intellect and refinement, of wealth and enjoyment, it almost rivals in frequency consomption

itself, and constitutes in fact one of the prevailing chronic diseases of the age ; some physicians have named it nervousness , some mimic and some proteiforme disease, in consequence of the difficulty of ascribing a seat to it.

In fact, the *lungs*, the *heart*, the *uterus*, frequently suffer in this insidious affection. Hence, dry irritating cough and disordered breathing; palpitation of the heart and faintness ; and violent hysteria.

In the earliest stage of these affections, if the spinal column be attentively examined, little alteration from its healthy state will be perceptible. In general, however, a slight degree of tenderness will be evinced by the patient, on the application of pressure in one or more points, from the middle of the dorsal portion , to the summit of the spine. At a more advanced period, spinal pressure will be scarcely tolerable,—and according to the duration or severity of the complaint, one or more of the vertebræ will exhibit the well known characters of disease, and the process of spinal deviation will have commenced.

To enumerate all the varieties of the affections depending on cerebro-spinal irritation, would be endless, says Dr Darwall : in all of them there is depression of spirits ; in almost there is pain and stiffness at the back of the neck, and the nervous sensations are particularly distressing. In some, there are slight spasmodic twitches occurring in different parts of the body. Every time that there is irregula-

rity, spasms, or convulsion in the organs connected with the spinal nerves, the state of the spinal column must be attended.

All ages, it is true, are liable to those diseases depending on some local or sympathetic irritation of the cerebro-spinal nerves, but young females are more particularly subject to these affections than adults, and the reason is obvious; it is at the approach of womanhood that the spinal column acquires its evolution, or complete its growth, and it is at that period that these affections of the head, of the lungs, of the heart, being improperly considered as organic diseases, the mistakes of the physician have the most fatal results. Is it possible for any physician to cure a disease, if he does not know it, and if he mistakes its nature?

Diseases depending on cerebro-spinal irritation having been very neglected, principally during youth, is it not probable that more direct attention will lead to more successful results?

Palpitations of the heart alone constitute a disease, although there be no organic alteration of the organ. According to Galen there are palpitations of the heart, though the cause be unknown; even in individuals apparently enjoying good health. The unknown cause in Galen's time is the state of the spinal nerves.

CASE XII.

A young lady, of delicate constitution, had been ill more than two years; the general as well as pectoral symptoms induced a belief that she was consumptive.

A careful examination by percussion and the stethoscope induced a different opinion in Dr William's mind, and on drawing the finger down the spinal column, a small lateral curvature was detected with considerable pain under pressure. The pressure on the spine brought pain *in the chest, palpitations and cough.*

The treatment being directed to the spine, the tumultuous movements of the heart and cough were relieved, and soon after the patient was cured.

The treatment for disease of the heart could, of course, be of no avail, as long as the cause was overlooked and unknown.

Diseases of growth commonly follow growth itself, as in children the organs of sense are often overexcited, the excitement produces convulsions. The head is the part of the body in which we principally trace the process of growth. In consequence of the closing of the bones of the skull, and of the appearance of the teeth. Diseases afterwards go from the head to the larynx, to the trachea, the bronchia, the lungs, the heart, then to the organs of the abdomen.

Coughing, irritation of the heart and lungs have not been sufficiently connected with the state of the spinal nerves; hence the difficulty of the diagnostic, and the great difficulty of treatment in some peculiar cases.

Though the nerves of sensation that run directly from the spinal chord to the central organ of circulation are comparatively few in number, yet when diseased, either at their origin or their course or ultimate ramification, they materially affect that important organ in its functions.

When professional men, from the knowledge of general symptoms, do not know the cause and nature of a disease, they may be compared to children playing at blind man's buff. For they practice medecine as chance, they draw lots from the bag of destiny, and they may or may not draw the prize that leads to a cure.

I am of opinion that there is no part of medical science less understood than the functions of the spinal marrow, of the spinal nerves, and the disease incident to them.

We do not know, said the late lamented Delpech, what influence spinal deviations have on the spinal chord, and what results to the nerves that originate or terminate it; but as long as we know the existence of paralysis, vertigoes, optical illusions, palpitations of the heart, and asthmatic oppression,

without any organic alterations, we are bound to be very circumspect in our judgment.

It is generally admitted that the spinal marrow is the influencing organ of nutrition, and as a proof we find that the acephales, or children born without a head, present the parts corresponding to the existing spinal marrow. If so, and the spinal marrow be the organ of nutrition, growth being impossible without nutrition, it results that the spinal marrow has more influence on growth than is generally supposed.

Indigestion and dyspepsia are not uncommonly the effect of irritation of the spinal nerves, but more frequently the cause of checked growth.

Asthenia or debility is often met with in young people during growth ; Dr Copeland, whose cyclopedical talents have shed so much light on every department of medical science, is of opinion that asthenia is caused by the diminution of the action of the cerebro-spinal system.

A circumstance greatly influencing the state of the health and the disorders of female youth, says the learned Marshall Hall, is the growth of the body. Nor is growth less influenced in its turn by the condition of the general health.

Too rapid growth, continues the same author, is apt to induce those disorders which involve a state of debility, but more frequently perhaps debility of the constitution or derangement of the general health,

impedes the growth and the due developement of the *form of the spine*, and of some of the large cavities of the body, as of the thorax and leads to distortions of a peculiar character.

It is very difficult to ascertain the first cause of the lost equilibrium : is the tardy or slow growth of the spinal marrow the cause of indigestion, or is indigestion the cause of the slow growth of the spinal system? Both circumstances may occur; but most commonly imperfect and irregular digestion causes a check of growth. No growth can progress without a good state of digestion, but it sometimes occurs that the atony of the stomach is really produced by want of nervous action.

Dr Marshall Hall has painted in very vivid colours the general disorders to which youth is liable, in schools. These disorders may surely be termed the diseases of growth, as physical moral and intellectual *growth* are the great end both of private and public education.

Dr Marshall Hall says, that the affection which he terms disorder of general health comes on imperceptibly, whether in boys or girls.—The young patient becomes pallid, languid, and listless; he loses flesh, cannot continue his studies, or his amusements, the tongue becomes white and its papillæ appear prominently through the load; the breath is tainted, the bowels are greatly decayed, constipa-

tion exists, sometimes diarrhea, the motions are very offensive.

There are attacks of headache and vertigo : the sleep is disturbed by dreams; there is agitation of the countenance, starting of the body and limbs, grinding of the teeth; sometimes transitory flushings, pallor and faintness; sometimes sickness, and vomiting.

With these affections which are recurrent, there is frequently a more permanent eruption beneath and within the nostrils, inflammation and minute ulcers of the conjunctive, *ciliary tinea*, excoriations behind the ears, deafness and undue secretion from the meatus auditorius, sore throat and enlargement of the tonsils, swollen lymphatic glands of the neck.

CASE XIII.

GENERAL DISORDER OR IRRFGULARITY OF GROWTH.

A young lady of fourteen was placed in a very good school in Paris. Her complexion was pallid, her constitution delicate, with the exception of the nose her face was grecian ; there were occasionnally eruptions on the nose. She went out with thin shoes and caught cold ; she suffered from headache, eruptions in different part of the skin principally under the nose, she was very pale ; her lips

were chopped and broken ; she was costive, but the costiveness was rather the effect of habit, resulting from the disgust she felt at going to dirty water closets, unfortunately so common on the Continent.

On attending this young patient, I found she wanted aperients, then strengthening diet; she recovered in a few days. She however had a second attack, her body was covered with pimples, her face swelled, and she complained of weakness, headache, and constipation. I prescribed for her and ordered an *English sound diet ;* I gave her a *private room*, for the *dortoir* where she slept was crammed with young girls; she took some martial preparations and soon after she recovered.

How different might have been the result, had this young lady been without friends in Paris. The medical attendant would have been called in *very late*, the disease would probably have taken a worse form, and had bleeding been resorted to, a long illness might have insued.

Parents placing their children at school, should make a point of having an able physician to watch over their health. It may be supposed that school masters, and school mistresses have an interest in watching over the health of their pupils, but the task is often neglected through ignorance. So many light diseases are removed by the assistance of nature alone, that in many schools illness scarcely meets with attention.

I have known a most distressing instance of the want of proper care. An English, lady anxious to follow the fashion and to see her daughter, who was fifteen, improve in the study of the german language, sent her to a boarding school, at a small village in Germany; she had been there about six months, when she was suddenly taken ill. The school mistress did not write, hoping her pupil would recover speedily, and being unwilling to alarm her friends. This young patient was an only child, the delight of her parents, necessity alone kept them at a distance from the child they loved so well. The fatal disease progressed : the mistress of the establishment alarmed, lest her interests should suffer, remained silent; and when the medical attendant declared there was no hope, a letter was sent to England saying the young lady had a slight attack of fever : the letter could not reach London in less than three days.—On its arrival, the fond father, alarmed for the safety of his daughter, started immediately for Germany.

The village in which the boarding school was situated, was at some distance from any town; when he at length reached the house where he hoped to embrace his beloved child; he knocked at the door; but in vain ; no one came to give him admittance. He rang violently at the bell, but without success. His heart sunk within him; he was almost frantic; his mind was struck with the most fearful present-

ment. He knew the grounds, went round by the garden ; climbed over the wall and approached the desolated abode. He observed a light, drew near a window, and looking through it saw a taper; the taper was placed on a coffin; the coffin was that of his child !!

To describe the state of this unfortunate parent would be impossible. An aged servant, almost paralytic was the only living being inhabiting this hall of death; she said the child had died from contagious fever, and that every one had quitted the house; she was left in the hall of death, because death had no terrors for her; as worn out by illness and infirmity, life was a burthen to her. The unhappy father was almost distracted ; he fortunately found relief in tears, he undertook to pay his child the last sad duties ; she was decently buried; alone he followed her to the grave, alone he wept; now the sorrow was all his own, for the childless mother was as yet ignorant of her loss.

It will now be asked whether the child could have been saved from the untimely grave. To answer such a question must be impossible, but it is clear that though a village Doctor may possess a certain degree of scientific knowledge, yet capital cities have great attraction for eminent men of every kind, and could it be avoided, I certainly would not allow any member of my family to be attended by the apothecary of a German village.

It is a mistake, in the present enlightened time, to give a child a rustic education ; the qualities of the golden age, are not now in vogue, and every sensible parent should educate his child according to his station in society.

I have already observed, that Dr Marshall Hall has described a peculiar state common to school girls, which he has denominated disorder of general health. But Dr Marshall Hall has not characterized what I call check of growth, a description will suffice in this instance.

Where a check of growth exists, the young patient becomes pallid, languid, and listless ; she becomes thin, cannot pursue her studies, or take pleasure in her usual amusements.

The tongue becomes white, and the papilla appear prominently, through the fur; the breath is tainted, the bowels greatly decayed, constipation exists for a time and is then followed by diarrhea.

I have already given this description which is one of stopped growth.

Dr Marshall Hall proves more and more how much this protracted disorder may injure the constitution.

" In some other cases, says that eminent physician, the tongue has probably become clean, but is slightly lobulated ; the breath is less tainted, the nostrils are more affected, there is sometimes an intolerable fetid effluvium from them ; the fingers are

occasionnally swollen, roughness, redness, and coldness ressembling chilblains, and I have known the ankles swell and the veins of the legs varicose.

" There is frequently a state of protracted bronchitis ; this induces habitual cough and expectoration, which are apt to be aggravated by cold , or by any cause of aggravation of the general disorders; this affection of the bronchiæ is that which it is most essential to watch." Dr Marshall Hall distinguishes two forms in the disorder of general health; but in either case, when we make the application of Dr Marshall Hall's observations, we find all the characteristics of stopped or checked growth. Parents who have anxiously watched over their children's ailings, can recognize in the symptoms of the disorders of general health all the symptoms of checked growth.

There are in the young transient and ephemeral pains in different parts of the body : the frame undergoing a kind of elongation, may not always do it with equal regularity in all the fibres of the different systems, and like the threads of the weaver, the threads or fibres of the human frame are liable to break ; thence arises pain. Dr Marshall Hall has also pointed out these pains as well as sir Benjamin Brodie, in his excellent work on nervous affections.

The nervous and muscular powers are variously affected in disorders of general health, because they grow differently. I am inclined to consider as irre-

gularities of growth, those erratic pains resembling to the tic douloureux, or rheumatism.

There is an observation that may assist a professional man in forming a correct opinion as to the irregularities of growth : it is to learn from parents or nurses, how the period of teething passed : if it was free from disorder, such as convulsions or any other serious malady, it may be inferred that the present stoppage of growth is the first disease, and therefore easier to cure.

But in cases where convulsions, in infancy, have been common, growth seldom progresses without some disorder of the general health, or the pains I have already mentioned.

CASE XIV.

VIOLENT PAINS IN THE KNEE AND WRISTS.

A child seven years of age, though delicate and thin, was born of healthy parents. Its teeth were perfectly regular, but the new teeth were black and decayed, as they appeared. In a year he had grown taller by 4 inches ; every day he bad fits of pain in the wrists, and knees.—The pain was intermittent, sometimes lasting only a few minutes, sometimes half an hour. No fever : but during the access of pain, there was an acceleration of the pulse. As

the child grew, the pains were felt; sometimes there was an eruption on the fingers; when the eruption was out, the pains in the joints disappeared, but when the eruption ceased, the pains in the joints were very great. The child's father suffered also from pains in the joints, so that the child was hereditarily disposed to the same affection. Invigorating diet, proper exercice, and country air restored the child to health.

I have said that diseases of growth followed the progress of growth, as a shadow follows an opaque body.

In infancy, the common diseases of growth are those of dentition, or teething, cerebral inflammation, then diseases of the wind pipe, croup, hooping cough; in youth bronchitis, pneumonia, consumption real or apparent, then palpitations of the heart. Besides diseases of the chest, there are diseases of the stomach, dyspepsia; and to terminate the diseases of growth relative to internal organs, there are diseases of the bowels, and of the womb.

The disorders of female youth, independently of the causes enumerated are much increased by habit. The confined, and loaded state of the bowels when casual, offers little or no danger, but it is not so when it becomes habitual.

Very few persons, says Dr Marshall Hall, escape the evil of a constipated state of the bowels : in female's growth this state no doubt frequently arises

from the want of a regular system of active exercise; a certain activity of the body is essential to ensure an uninterrupted peristaltic movement of the intestines. In a state of continued inactivity these movements are delayed, the evacuation becomes scanty and less frequent, and the intestine remains loaded.

Another cause of constipation and load of the bowels in young females, is the frequent delay in yielding to the first sollicitations of nature; in France this arises particularly from the filthy state of the water closets. It is a matter of wonder that a nation so refined, and having so high a sense of delicacy, should pay so little attention to that department of domestic economy.

One of the wonders of Rome was the building of a large *cloaca*, to empty the refuse of the eternal city into the Tiber. One of the wonders of London is the state of its sewers. London is suspended over a labyrinth of subterranean passages, that carry in the Thames the impurities of the great metropolis. It is a natural consequence, that all bodies that receive must reject, or their bulk would unceasingly increase. So it would be with the human body, it would increase were it not relieved, by the motions of the bowels. Seneca, in olden times, remarked, that well regulated bowels were one of the principles of the freedom of man, and he called that state, *bene moratus venter*.

Locke, the celebrated English philosopher, devoted several pages of his work on Education to show the necessity, and possibility of regulating the wants of nature. He was of opinion that good health depended greatly on the attention given to those functions. So did the celebrated Abernethey; nearly all English physicians agree on this subject.

A misplaced sense of delicacy, engagements from which persons do not free themselves, perhaps the inconvenient situation of the water closet, or in France the want of cleanliness, all tends to create a disregard of the calls of nature, and lead to general or habitual constipation.

In England, delicacy on this subject is generally carried to a most pernicious extent. Whatever may be the objection to consider subjects of this nature, yet are they essential to life; it has pleased Providence to subject us to wants of this kind for the maintenance of health, and it is our duty to attend to them. Tycho Brahe driving out with the Emperor of Austria, and not daring to have the carriage stopped, in order to satisfy his natural wants, died from the effects of this restraint. The female mentioned by Sterne, showed more sense than the german philosopher.

The most common diseases produced by constipation are sick headaches, dyspepsia, colics, absence of monthly discharges, piles.

As there is a language for each country, so there is

a peculiar medical treatment; each language has something belonging to the soil in which it is spoken, each mode of treatment has something peculiar depending on the climate the people inhabit, on their mode of life, and on their natural constitution.

A french child brought up to feed principally on bread will be surely more delicate, more irritable, than the english child living principally on meat.

It is not only the human countenance that differs according to the different nations; some nations differ from others in all the fibres of their organization, no people offer a greater contrast than the English and the French. The same medical treatment is not suited to Paris and London. The principles of medical treatment must be based on a knowledge of the organization of people, the peculiarities of treatment according to the national habits are known only to those who have directed their attention to that study.

I must confess I should not prescribe for English patients, according to the principles of French medical doctrines. I say more; if the two doctrines were fully considered in their *tout ensemble*, in acute diseases, I prefer the English mode of treatment. But I must be fair, in the treatment of chronic diseases the French have the advantage. Fifteen years practice in London entitle me to give a free and candid opinion as to the English mode of treatment. London is a fine field for information, and

I should have been unjust to myself, had I not taken advantage of the many opportunities offered to bring into my own country the practice of a great and enterprising nation.

My partiality for English practice is based on the comparative effects of the two methods. The French leave more to nature; a disease takes its course, and time cures it; in England nature is assisted energetically, and statistical returns prove the advantages of the English system.

The English have progressed in medecine, as they have progressed in politics; they have conquered a world of riches, their utilitarian spirit is applied to all subjects. — Formerly French medical men were appointed in every court; the places are now mostly filled by English men, and they are honorably filled. From the difference of habits, of organization, of climates, the medecine of the two countries is at variance; according to the French, nearly all diseases are inflammatory, and treated by bleeding, and strict diet. According to the English, all diseases are bilious; hence the necessity of aperients. In France, the symbol of medecine is a lancet; in England, an aperient. By applying any of these systems inconsiderately, we should probably do much mischief; such is the case with ignorance and common practioners, whether English or French, who know but the little they learned in

schools, and remain satisfied with a poor stock of acquirements.

CASE XV.

OBSTINATE CONSTIPATION.

While practising in London, I was called to see an English young lady, who had been educated in France. She was about eighteen ; the menses were not regular, she had palpitations of the heart, head-ache, inflammation of the conjunctiva, and obstinate constipation. She had contracted the habit of using injections, but they produced little effect ; the slightest noise agitated this young lady, and she easily shed tears. I met Dr Cluttenburck in consultation, a gentleman well known by his works on fever and inflammation.

Dr Cluttenburck proposed a strong purgative in order to clear the bowels. I observed to Dr C. that the young lady having been brought up in France, had partly acquired a french constitution, and that the treatment must be modified. The Dr being my senior, insisted on having a trial. During the night in which this strong purgative was taken, I was called to attend this young lady suffering from intense pains in the bowels. She was in a state of excitation and fever. I gave her an anodyne and

discontinued the strong aperients, when happily she had only taken half.

In this young patient, I suspected the constipation to be caused by the inert state of the nerves of the lumbar region. I had that part of the vertebral column rubbed with a tonic liniment. I then prescribed a weak dose of nux vomica, which had an effect on the spinal marrow. The following day she had a motion; and in a fortnight the young lady was free from constipation, headache, and the menses afterwards appeared regularly.

This case fully proves that the English system of aperient and purgative medecines is not applicable to every body, and that a medical man must consider the individuality of his patient.

Dr Holland, in his medical notes and reflexions says: " If asked whether the use of purgative medicines, beneficial, beyond all others under certain conditions, is not carried too far, in modern English practice, I must affirm my belief, that it is so; and experience strengthens the conviction."

Delpech in his work on orthopedy relates a case, in which a young lady had abdominal pains, caused by the state of the lumbar vertebræ. It is beyond question that the lumbar nerves of the spine have an influence on the organs, where they terminate, so that the lower bowels, the womb, the legs, are under their dependance.

CASE OF HYSTERIA.

I was requested, says Dr Bright, to see a young lady in the city, who had lain for a fortnight, suffering day and night from a convulsive effort, something between a hiccup and an attempt to vomit; this was incessant; I heard it, as I entered the house door, though she was in the bedroom above stairs. She was weak and exhausted with a clammy perspiration, and a dry tongue : it was impossible not to feel anxiety for the result. A blister to the *nape* of the neck, cold applications to the forehead, purgative and cathartic extracts, tranquillised the whole in the course of a night, and in two days, she was quite well.

Hysteria seems to single out and affect every organ, every function which belongs to the true spinal system; like the emotions, it also affects the action of the heart, the secretions and especially those of the kidney, and of the womb.

Dr Marshall Hall, in his ingenious researches on the nervous system, has superabundantly proved, that all spasmodic and convulsive diseases were affections of the true spinal marrow. And as a spasmodic disease, hysteria is intimately connected primarily or secondarily with the spinal marrow.

HYSTERIA RESULTING FROM CHECKED GROWTH.

My most valued friend Dr Voisin, whose heart and understanding do honor to human nature, has related the following fact in his excellent work entitled *Maladies Mentales*. A young girl aged thirteen, of fair and delicate complexion *was checked in her growth*. She had enjoyed good health till she was eleven; at this period she felt strangulating sensation with fear of suffocation, and palpitation of the heart, medical means were employed with little success.

She was once seized with fits that lasted from eight in the evening till three in the morning; she had convulsions and contractions, she laughed immoderately, was stiff and motionless.

After a few minutes relapse, the symptoms became more serious, her heart beat violently, the pulse was frequent, small and irregular, the muscular contraction so strong that four men could scarcely contain the patient. She beat those who had hold of her; after the fit, she was amiable, kind, and affectionate. Suddenly fresh symptoms succeeded, the œsophagus was contracted, she lost the power of breathing and was apparently a corpse; the respiration appeared to have ceased, the pulse could not be felt. This state lasted one hour, and the spasms subsided.

The following day, she had hysterical fits, though less violent, she suddenly took a dislike to her mother, brought on by the refusal of an object her mother had promised. This poor girl was sent to the country ; *growth resumed* its course and the young lady recovered.

MASKED HYSTERIA CAUSED BY THE STATE OF THE LUMBAR VERTEBRÆ.

Dr Laycock presents, in his excellent monography on hysteria, a case that deserves to be mentioned.

Hepworth, a young female aged 19 years, of fair complexion ; light hair, and rather muscular, was admitted into the York county asylum, complaining of pain under the left breast, sleepless night and palpitation. More particularly she suffered from a sensation in the left hypocondrium, as if a hot tin vessel was applied to the skin, or as if leeches were fastening upon it. She began to menstruate at the age of fifteen years *but very* IRREGULARLY. At each monthly period, she suffered great pain and she had great difficulty and pain in evacuating the bladder. She suffered from back headache, but in other respects continued well every day, until eight or nine o'clock in the evening, when her abdomen used to become exceedingly tense and tender, and she was wont to vomit excessively for an hour or two, when

all the symptoms disappeared, and again she felt tolerably well; upon examining her back, the cervical and several dorsal vertebræ were tender to the touch. After a proper attendance she was relieved, and left the hospital, but she came again. The tenderness was now all over the whole surface of the back, she had frequent numbness and pricking of the legs, headache, dimness of sight, sweating of the loins and the most obstinate constipation. The appetite was variable, sleep never sound; she was cured by the treatment of the spinal column.

Hysteria is a disease very frequently met with in young ladies. At schools, that affection is so much the more dangerous, that it is very imitative.

One afternoon, says Laycock, I was called in the women's surgical wards; a young, well formed female, with disease of the right hip-joint had complained of headache and nevralgic pains during the morning; she was at last suddenly seized with a violent retching, crowing, breathing, sense of suffocation, aphonia, inability to swallow, suffusion of the face, violent headache and tumefaction and pain of the abdomen.

A young female patient, who went to her assistance, became soon affected in a similar manner, the retching in her, being most distressing.

A third, in an adjoining bed, was next affected with violent convulsions, terminating in paleness of the face and complete insensibility. Her pulse and res-

piration could scarcely be observed ; at last a fourth began to vomit and then cough incessantly, except when interrupted by a loud convulsive sob. I must confess I had no conception at first of the nature of the affection, but suspected, from the great retching and vomiting, that the patient had taken something poisonous. I proceded to make inquiries, when an old nurse said she had frequently seen the same thing in another hospital ; I then remembered Boerhave's well known cases, in the Orphan House at Haarlem, and by administering suitable remedies, the patients were all relieved within three hours.

In schools the mistresses and governesses ought to be attentive, to separate and isolate from others pupils, any hysterical young female suffering from fits. Nothing is more catching than this imitative mania ; a volume might be written on the singular effects produced by the convulsive movements of one individual on another in perfect health, very commonly exciting a similar series of movement.

This imitative mania is the result of one of the best qualities in youth. It is because young people are so apt to imitate good or evil examples that it is so important to place them under proper guidance and to select their company.

I am fully aware that cases of imitative hysteria are foreign to my subject ; I quote them, *en passant*.

Diseases depending on the state of the spinal co–

lumn are certainly more common than is supposed.

Dr Marshall relates cases of patients simulating organic pulmonary diseases, while the dorsal vertebræ were tender on pressure. Dr Entz, in Germany, found spinal tenderness in almost every case of dysmenorrhea. I have always been astonished that medical men paid so little attention to spinal nerves; indeed from this circumstance it might even be supposed that these nerves do not exist; yet, a nerve may be affected at its origin, during its length, and at its extremities.

In a young female, a slight touch, or gentle pressure on the first bone of the sternum, induced immediate cough; is it not known that the transit of a nerve, through an osseous foramen, or over any part where it is exposed to pressure, gives rise to pain at the extremity of that nerve? Who does not know from experience the pain and numbness of the fingers, when the cubital nerve is accidentally pressed?

If it be universally acknowledged that irritation of the nerves of one organ, may be communicated to those of a second, having an anatomical or functional relation, we shall have very little difficulty to understand all the hysterical disorders to which young ladies are subject. Dr Entz proved by facts, that nearly in every case of dysmenorrhea, there was spinal tenderness. I think it will not be difficult

to prove that, in nearly every case of amenorrhea, there is stoppage of growth, not coming from the womb, where the lumbar spinal nerves terminate, but from some morbid state of the medulla spinallis. Life flows from the arteries, and from the nerves of the principal trunks; the organs cannot grow, if these principal trunks suffer from irregularity of growth.

The sap does not commonly reach the branches and the leaves, if stopped in the trunk of the tree. So it is with growth, there are some organs placed at the extremities of growth.

The womb for insistance is the last organ completing female growth. If the womb does not fulfil its monthly functions at a proper time, growth is stopped.

Chlorosis, amenorrhea, dysmenorrhea ought consequently to be placed among diseases of growth; their origin may be found in the state of the blood, which is the human sap, or in the state of the principal trunk of the nerves.

It is generally known that the constitutional change in young women is seldom established, without pain and nevralgic pains in the back, and in the lower extremities, partial numbness, contractions, and cramps in the legs; with such a train of symptoms, how medical men have not acknowledged, that the lumbar region may have some connexion with

chlorosis, amenorrhea, dysmenorrhea, and other diseases of the womb, or of the bladder ?

I have already observed that all checks of growth were caused by the state of the blood, or that of the nerves. Chlorosis most undoutedly proves that the stoppage of growth results from the impoverishment of the blood.

Both French and English physicians too easily forget that blood is the life of the flesh, and that blood conveys all the materials of growth.

There is no period of life in which the state of the blood has more influence on health than during youth. Not only is blood necessary to growth, but, if I may so express it, an exuberant quantity is requisite. It is blood that generates the bones, the nerves, the muscles, in fact all the tissues of the human frame; but if the fluid from which comes all those principles of reparation and growth be weak, if it does not contain the reparative elements how could growth proceed?

There are few diseases in which impoverishment of the blood is so marked as in chlorosis; it is thin and watery, it does not carry the nutritive, and reparative substance, it cannot be called a *fluid flesh* that adheres in circulating to every organ that requires it for reparation, or for growth. When the blood is watery the whole system is arrested in its growth, not only is there no reparation, but no waste.

All analytical studies made on the blood of chlorotic patients, have proved beyond doubt that it contained more water, and less reparative substance than in a healthy state.

Some authors have considered chlorosis as a state of anæmia, but it is the particular anæmia of the young; it is the anæmia of arrested growth. Many authors and some of weight, have considered chlorosis as resulting from the state of the womb; that is a material mistake, it is taking the effect for the cause.

Let it be remembered that in chlorotic girls, there is a constant state of costiveness, and other symptoms that show this affection of youth to be but a stoppage of growth: how is it possible not to acknowledge the fact, when we find the blood drawn from the arm watery, its molecules unconnected, when all the tissues languish, when the skin and mucous membranes are discoloured? The impoverishment of blood, whatever may be its cause, is the principle of chlorotic disease. It is on this state of the blood that depends the check of growth, peculiar at the approach of the constitutional change. How can that change, the symptom of complete growth, take place, in female youth, when blood is wanting to repair the loss, when all organs are etiolated and languishing? In the majority of cases, chlorosis is a check of growth; at the age of womanhood, it is

very important to observe that fact, as it leads to the curative indication.

When from fourteen to eighteen, growth languishes, or is slow, or irregular, the organs corresponding with the lumbar regions do not grow, their functions do not begin or they are arrested. Hence the various diseases known by the name of chlorosis, amenorrhea, dysmenorrhea.

I repeat that in the majority of cases, chlorosis is a check of growth depending on the impoverishment of blood, at the time approaching to womanhood.

CASE XIX.

CHLOROSIS ACCOMPANIED WITH VIOLENT COUGH.

A young lady, in whom the constitutional change took place when nineteen, had grown very rapidly and suddenly; she was thin and pale, her spine was deviated, her chest contracted. She frequently complained of pain in her side, she had continual palpitations of the heart, could take but little exercise and suffered from weakness in the legs; her lips were pale, she had a constant dry irritating cough, her pulse 120. The menses were not regular which increased the cough. Some physicians considered this patient consumptive.

Notwithstanding this complication of symptoms I prescribed steel, and in a week the young patient

began to improve. The pulse remained the same, at first she suffered from headache; I prescribed aperients and continued the steel, the patient gained strength. She went for change of air to a sea port town, she bathed, and continued the steel. The following month a most favorable change had taken place; the cough had ceased, the pulse was 70. This young patient continued under my care, some little time, and is now married and in good health.

CASE XX.

CHLOROSIS AND CHOREA.

A young lady of weak and delicate constitution, was subject to constant fever, followed by chlorosis, continual palpitations, want of appetite, hyponchondria. This state lasted three years. When I first attended her, she was seventeen; she suffered from headache and oppression, her hands were swollen, her nose blue, her lips white, and her eyes sunken. The menses appeared at sixteen but were not regular. After being attacked with chlorosis, this young lady grew suddenly, she then became languid, and her growth stopped. I soon found that this young patient required great care; I carefully watched over her state of health; I attended her as a friend, and in a few weeks she recovered her health and spirits.

It would be easy to prove by many observations of eminent men, that chlorosis results from the impoverishment of the blood during the period of puberty, and that this disease is in fact the want of the full developement of the organs completing growth; that the state of these organs is not the cause but the effect, and that the object of medecine is to furnish the means of completing growth by improving the blood.

CASE XXI.

CHLOROSIS AND PALPITATIONS MISTAKEN FOR DISEASES OF THE HEART.

A young lady who grew suddenly became very weak, had constant palpitations of the heart : her spine was deviated. Her joints were large and painful, her feet swelled at night, the monthly discharge was not regular, she had a dry cough, no expectoration. The chest was contracted, constipation frequent, great oppression at night, constant fear of death, from suffocation. Lips pale, tongue white, the nails blue. I prescribed for this patient; in a few days the palpitations were less frequent, and she breathed more freely. Unfortunately the apothecary took upon himself to change the prescription; he gave steel, ether, cinnamon, ginger, safran and other stimulants. The patient had scarcely swallowed

the draught, when all the former evil symptoms returned. I complained that my prescription had not been followed : the parents replied they were quite sure the apothecary meant well ; it was nearly two months before a favorable change took place ; but by continued and constant care, this young lady completely recovered.

Some years since I wrote a work on chlorosis ; having had many opportunities of observing that chlorosis existed in girls who had not completed their growth, I came to the conclusion that chlorosis resulted from checked growth of the womb. The cases in support of this opinion were so numerous, that I could not refrain from expressing it, and having read the opinions of numerous writers on this disease (chlorosis), it did not appear to me that they had ascertained its real cause, and I have not found sufficient reasons to alter my opinion.

Parents and medical men themselves are too enclined to consider chlorosis as totally free from danger. It is not so, where anasarca supervenes to great pallor, there is the fear of effusion into the brain and of fatal result, which is sometimes of the most insidious, sometimes of the most sudden kind.

Dr Marshall Hall, that I am happy to quote often, because he is a conscientious and a practical man, has in eight years seen four cases of fatal chlorosis. The following case is related by him.

CASE XXII.

CHLOROSIS, DEATH.

Miss H.... was well, with the exception of a little constipation, when she went to school at Boulogne in 1828, aged thirteen.

She remained a year and returned home. She went again in six weeks and remained another year; and during this year, the catamenia did not appear and the bowels were constipated. On her return home, she looked pale, but she was stout, and grown, lively and in good spirits.

A fortnight after her return, the catamenia appeared, but they were pale and scanty; the bowels were constipated. She continued pretty well till july 1833, when she became sallow, pale, affected with pain of the head and shortness of breath, and coldness and dampness about her person : the catamenia gradually diminished in quantity and colour; the bowels were constipated, and she became fond of concealing and eating dry rice, coffee and tea leaves.

About a year ago, the paleness augmented still further and the œdema assumed the characters of anasarca. The perspiration became offensive; the catamenia were scanty, pale and yellowish, or grenish, and varying much in color, but never red.

Dr M. H. saw Miss H... on the 6th december 1834. The countenance was pale, and slightly œdematous, the legs anasarcous; the head affected with delirium, with a degree of intolerance of light and noise, the breathing was hurried, and rather audible and ratling, with cough, the pulse 130 and throbbing; the abdomen tumid.

These symptoms continued : at first there was delirium, afterwards there were dozing and slight coma : afterwards the mind was clear; at length the coma returned, the perspiration became momentarily suspended, and the inspiration sudden and sometimes catching; the abdomen became decidedly tympanitic, with the escape of much flatus; the pulse continued at 130 and sometimes 140, with fulness and throbbing.

The strength gradually declined and dissolution took place rather suddenly, after the free evacuation of the bowels.

On examination, there was effusion of serum and of opaque lymph under the arachnoïd of the summit and the base of the brain ; there was an effusion of six drachms of serum into each ventricle.

This case is important for it demonstrates the tendency of that disease to induce not merely external dropsy, but effusion under the arachnoïd, and into the pleura, the pulmonary cellular membrane; it is important too as non equivocal representation of the disposition to such organic changes in cases of

bloodlesness and exhaustion. It is also important to shew, that not only serous effusion, but the deposit of coagulable lymph may take place without inflammatory action, in similar circumstances, and that consequently such deposit of lymph is no proof of inflammation. »

Among patients affected with chlorosis, it is not rare to find cases in which the affection of some portion of the spinal prolongation is affected.

CASE XXIII.

CHLOROSIS.

1836. Eliza...., aged 16, a delicate chlorotic girl, with pale cheeks and pale lips, has always lived in London, and has enjoyed tolerably good health.

She has been engaged for the last four years in a sedentary occupation; and has rarely quitted the house, sometimes not for weeks together. The catamenia appeared a year ago, continuing for three days, but were of light color : they observed the natural period for five or six months, but on each successive recurrence were more scanty and serous; with lumbar and pelvic pains and great lassitude. For the last twelve weeks, the function has been entirely suspended, and she has suffered for some time

from dyspepsia, constipation of the bowels and intense headaches.

The martial preparations being judiciously administered, gave to the blood the nutritive elements it wanted, menstruation took its regular course, growth progressed and the girl was cured.

Chlorosis is one of the diseases in which the power of medecine is most manifest. The cure of a chlorosis is almost certain, if the treatment is properly conducted.

Dr Ashwell physician to Guy's hospital has written a very valuable paper on *chlorosis*, and he defines it to be a *peculiar affection of general health*, most frequently seen at the time when puberty is, or ought to be established.

Far from considering chlorosis a slight affection, the learned and experienced doctor says that the consumptive tendency among young chlorotic females and the imperfect establishment of menstruation is not the result of a weak constitution, but the result of chlorosis. If by chlorosis Dr Ashwel meant stopped growth, I agree with him, but I cannot see in chlorosis any other peculiarity. Chlorosis is more frequent at the approach of womanhood ; it is generally connected with amenorrhea, and the coincidence is easy to understand. Womanhood in young female is principally characterized by the catamenial discharge. This phenomenon indicates their full growth; how could it happen,

if the blood is wanting in its reparing and growing qualities as it is in chlorosis? I am naturally lead by the study of chlorosis to speak of amenorrhea, dysmenorrhea, and hemorrhagia; only as relating to my present subject.

WOMANHOOD.

Of all that has been written on love and on woman, I never met with an observation so sensible as that of M^rs^ Jameson's, when she emphatically denounces parliament for its remissness in not providing against the evils of falling in love suddenly or unprepared.

" Strange and passing strange, says this lady, that the passion of love should not be taken in deeper consideration by our teachers and legislators! People educate and legislate as if there were no such thing in the world.—Why should love be less seriously treated than death? Death must come, and love must come. "

Indeed, love must come, its time is marked by nature, like the time of weaning, when the child's teeth grow; love is a feeling that makes its appearance, when organisation completes its growth. Henry the Eigth's daughter could legislate to prevent mariage, among common people before twenty eight and thirty years of age, but could not prevent the

feeling of love that burst even in her own undaunted and proud bosom. Love must come, it is an effect of growth, and there is ignorance of the general laws of nature in not preparing girls to meet it, as we are taught to meet death. But it is not only in a moral sense that we must prepare girls to meet love, and educate them like reasonable creatures fit to manage their own feelings, but in a physical point of view, parents must consider with the greatest attention an epoch in which, the life of their daughters is most in danger. We hear of kings on the throne, of great men, losing daughters at an age where it was little expected, because the dangers of puberty are unknown to most parents or overlooked by them.

When puberty approaches, when that tender and delicate flower of the creation, woman, nearly attains her full blossom, it is then that she is surrounded by the most fatal diseases, if the function that completes her growth is not attended to; at that period, the moral and physical character of girls is modified. The toys and pleasures of childhood are left behind, the tastes become similar to those of a fully developped female. Struggles arise in her bosom between modesty and inclinations of whose nature she is ignorant. *Love* arrives, and while her mind is full of the most fantastic ideas, of the most uncertain desires, while her heart wants something to love, she seems to seek for affection from her

parents ; her constitution attaining its full growth, her blood being warmer, and following its natural channel, MARKS the complete evolution of the womb and the full growth of the young female.

When growth has been regular during childhood, puberty, arrives without struggle or with little pain. The tide of the monthly functions takes its course and the health and duration of the life of girls become safer ; but it is not so when that natural function does not take place, life is endangered as long as puberty is delayed ; the stream that is destined by nature to the most important functions for the preservation of the human race, that stream being stopped in its regular course, goes, to the head, to the heart, to the chest, weighs on these or on other organs, impedes or disturbs their functions and gives rise to various fatal diseases.

Love must come, says M^rs^ Jamesom, and this talented lady wishes that girls should be prepared to receive it, not to be astonished, frightened or ignorant. What is said of love considered in a moral point, I apply it to one of the most important function of female life, and I should wish that a mother should prepare her child for the appearance of a phenomenon, which might easily frighten her if she were ignorant of its future apparition, —the function that generally completes growth in females is called menstruation.

Between ten and twenty, menstruation appears,

regularly or irregularly in our climates of central Europe. When it happens between ten and thirteen, it may be classed as a precocious and rapid growth, but from fourteen to eighteen, is the most proper time for the appearance of catamenial discharge. Before thirteen, I should consider the appearance of menstruation as precocious, unless all the other parts of the body have followed the progress of that function. After eighteen the non appearance of a regular menstruation, would lead me not only to suspect some irregularity of growth, but some chronic affection of an important organ.

In a perfectly healthy female, the catamenia ought to be and are thrown off without concomitant suffering; but in the present state of society, this is not generally the case. For some days previous to the eruption, the patient is liable to headache, languor, and heaviness; she is indisposed to exertion and complains of pain in the back, loins, and down the thighs. Occasionnally there is uneasiness and a sense of constriction in the throat, about the thyroïd gland. There is a peculiar dark shade over the countenance, and especially underneath the eyes, the cutaneous perspiration has a faint sickly odour. The mammæ are enlarged, hard and often painful: the digestion is somewhat impaired and the appetite fastidious. After these symptoms have shown themselves, the menses appear and the uneasiness diminishes; it occasionally happens that the second

or third period will pass without any discharge in healthy females, it lasts from three to six days, and from four to six ounces of fluid are discharged.

The catamenia ought to return every 28 days.

From fifteen to forty five, or from its beginning, to its cessation, that function is the regulator of female health.

« Toutes les autres fonctions, says Dr Roussel, semblent lui être subordonnées. Cet écoulement est dans la femme le signe et pour ainsi dire la mesure de la santé. Sans lui, la beauté ne naît point ou s'efface, l'ordre des mouvements vitaux s'altère, l'âme tombe dans la langueur et le corps dans le dépérissement. »

Very few people have sufficiently understood of what importance is that tide in women's constitution, for very few people have ever calculated the time that nature consecrates to that function. Women are subject to menstruation during twenty eight or thirty years of their life; in a woman whose constitutional tide lasts eight days, if you calculate the number of those days, you will find : that eight years out of thirty are occupied by that function, and as during that state, women are weaker and more sensitive than at any other time ; it is easy to understand how the catamenial discharge becomes a frequent source of disease.

When puberty is nearly accomplished by the ma-

nifestation of the change that indicates the full evolution of the womb, and when the womb is to cease its function, it is then that woman's life is most in danger. But with that difference, that when menstruation appears in girls and continues regularly, her life is more safe, nearly all diseases that were existing before the apparition of menses, cease; many mistaken disorders, such as palpitation of the heart, false consumption, hysteria, epilepsy, vanish astonishingly. Roussel has then said truly, that the vital tide peculiar to women, was the regulator of their health.

The cessation of menstruation has been considered the most dangerous period for women. It is in fact at that period, that their life is so precarious, it is at that period, that the most formidable diseases of the generative organs, make their appearance, or arrive at their fatal termination. Cancerous and malignant diseases are frequently met with from forty to fifty; — but in speaking of the diseases incidental to youth, I must not anticipate, although it is not unnecessary to know in what manner the first catamenial discharge had taken place, for very often in maturer age, diseases are but the development of a previous seed.

Dr Locock who has the honor of attending a Queen, who though surrounded by royal splendour is no more exempt from the maladies of the human frame than the meanest of her subjects, Dr Locock con-

siders amenorrhea in the form of delayed puberty, incomplete puberty or *incomplete growth*.

We meet, says the royal accoucheur, with young women of a stinted growth, who although of eighteen or twenty years of age resemble children in conformation, with a weak and languid frame, attenuated and colourless. The case is obviously then one of constitutional debility. Puberty is delayed, but puberty may also be delayed with another condition of the body, where the general health and strength, continue unimpaired; the *growth* proceeds, yet the probabilities are that the ovaries are either absent or have become so diseased that their functions are entirely lost.

But when at the usual age of puberty, a decided change in the system is observed, and a struggle is evidently taking place to bring about the sexual functions, although followed by no actual developement, we may conclude that the defect is only in degree, and that by proper assistance, nature will accomplish her object.

In these cases, as puberty approaches, there is a marked derangement of general health, from the powers being unequal to the impending struggle. The patient has perhaps grown too rapidly and has perceptibly become emaciated; the face and lips are pallid, the hands and feet cold, particularly the latter; there is great lassitude; the tongue is foul, the bowels are costive, the appetite is defective

and irregular, the pulse slow and feeble. Every part of the system partakes of the general torpor; the circulation becomes still more languid; and the blood seems as it were to stagnate in the veins. A more aggravated series of symptoms gradually supervenes; the digestion is nearly gone, the tongueis covered with a dirty coat, and indented at the edges, by the teeth; the breath is fetid and there are frequent acid or offensive eructations, with air rumbling in the bowels. The spirits are weak and depressed; hysterical tears are easily excited, and delusions will occasionnally be manifested : the absorbents partake of the general debility; and there will be puffiness of the face after sleep and swellings of the legs in the evening. Palpitations of the heart will be troublesome, there will be dispnæa on the slightest exertion; and together with these latter symptoms a short distressing cough. Hence it is that there is no disease more frequently mistaken for consumption; nearly all these symptoms will be found in that peculiar state called amenorrhea.

AMENORRHEA.

The absence of that phenomenon which characterizes puberty among females is called amenorrhea. Amenorrhea denotes a trouble in the economy; the

bloodis prevented from following its natural course, flows through different organs of the body, and occasions diseases too often fatal.

I consider it under two divisions.

Amenorrhea from absence of puberty or irregularity of growth.

Amenorrhea interrupted by a defect of conformation or by some other affection.

The further developement of amenorrhea belongs to a work on diseases of females in general.

As the age varies considerably in which puberty is established, not only in different countries but in individuals residing in the same country, the absence of menstruation at the usual epoch must not at once be regarded as a disease. The phenomenon of growth must be considered first; a tardy developement of the body will be followed by a tardy menstruation. Or, if the health be feeble, owing to rapid growth and excessive leucorrhea, the developement of the genital system will necessarily be delayed.

We ought not, says properly Dr Aswell, *hastily* to conclude that puberty will not be established and still less that its non appearance is caused by congenial deficiency or disease; but every measure for invigorating the general health should be fairly and long employed, before a case is regarded as hopeless.

The cases of amenorrhea resulting from impeded

growth are frequently connected in young females with chlorosis.

CASE XXIV.

AMENORRHEA, CHLOROSIS.

Emily ***, aged 17, a tall thin girl of florid complexion and of intelligent appearance, was admitted under Dr Ashwell's care. She had always been weakly; and for the last four or five years had been *subject to an affection* of the chest from which she had been free, since the existence of her present malady. Two years previous she had phrenitis, and had since been in imperfect health, often having been seized with aggravated fits of hysteria, so that she fell and remained insensible and motionless for hours together. She was deaf, and had once had otorrhea; but its presence was attributable to an accidental injury of the *meatus externus*. She had intense headaches, chiefly affecting the occiput; the cephalalgia was unusually severe, and afterwards her right foot and hand were frequently in agitation. A month subsequently she lost all use of them, from which time there had been a great aggravation of pain. *Menstruation had only been once regular and natural;* her symptoms were dulness, that approached almost to imbecillity; she had constant and rather acute occi-

pital pain, violent agitation of the right side, with occasional spasms of the left.

The treatment pursued was the same as in chlorosis. After three months she was quite well. During that time she gained her strength, her general health was confirmed, the catamenia appeared although but scantily.

The most simple cases of amenorrhea are undoubtedly those depending on protracted puberty.

CASE XXV.

AMENORRHEA. — COUGH. — SEVERE PAINS IN THE CHEST AND HEAD.

Catherine Carey, æt. 16, was admitted in St-George's hospital under the care of Dr Seymour.

The symptoms were: a delicate appearance and chlorotic complexion; pulse rather languid, tongue moist and whitish; bowels rather confined. She complained of pain over the sternum, increased on every exertion, but not on making a deep inspiration; frequent hacking cough without expectoration; distressing pains over the head aggravated on rising in the morning, and attended with occasional dimness of vision; no appetite for animal food, which she said made her sick. Her illness had com-

menced nearly three months previously, with a bad cold accompanied with a *globus histericus;* at this time she spit blood, but in no great quantity; when the pain in the chest and head commenced, *she had never menstruated.*

This was a case where the menses had not *yet flowed* and the leading symptoms in the group *were clearly nervous.*

Primitive amenorrhea is that which consists in the absence of catamenial discharge, either, at a time when the body has attained its full growth or when the girl has attained an age in which that growth ought to be completed.

Sometimes amenorrhea is caused by an excess of strength, but it is the less common, for such state is easily relieved. In the majority of cases amenorrhea is caused by general debility, and it is then generally connected with chlorosis or other diseases, and must be considered as caused by protracted puberty or by stinted growth.

Dr Fleetwood Churchill, in his excellent monography on the principal diseases of females, says with reason that the subject of the simple form of amenorrhea being either of a plethoric habit of body and robust health, or of a weak, pale and delicate constitution, the symptoms vary in each.

In the former, the constitutional suffering is more severe with considerable febrile action, flushed face, quick full pulse and thirst; in the latter, the sympa-

thies of distant organs are manifested more slowly, and there is little or no fever, the pulse being small and moderately frequent, and there being neither thirst nor heat of skin.

In fact, says Churchill, they appear to have a relation to each other, something like the acute and chronic stages of other diseases.

In both cases, nature's attempts to accomplish menstruation at each month, are accompanied by shiverings, pains in the back and loins, weight at the lower part of the abdomen, aching down along the thighs, general lassitude and uneasiness, and sometimes pain, in the thyroid gland; these symptoms after lasting a short time pass away without any menstrual secretion, and are repeated each succeeding month.

But the effects of this abortive effort are sometimes not so temporary. Severe headaches occur occasionally, sometimes with a dislike to light and sound; the patient complains of throbbing and of a sense of fulness in the head, pain is felt in the side, the stomach and bowels become irregular in their functions, the countenance pale and the strength much reduced. Paroxism of dyspnæa and hysteria come on, and the patient has the appearance of confirmed ill health.

The causes of this condition, says Dr Locock, are generally to be found in the previous habits of the patient; for it is most frequently met with in those who have led sedentary and indolent lives and been

accustomed to hot rooms, soft beds and too much sleep.

CASE XXVI.

DROPSY. — SWELLING OF THE LEGS FROM AMENORRHEA.

A young lady aged sixteen, of a strong constitution had for two years suffered from a pronounced hysteria, characterised by an involuntary contraction of the muscles of the face and the extremities, and also by her changeable dispositions. At one moment sad and weeping, the next moment lively, gay and laughing without any motive. *The menses had not yet appeared*, and she felt no inclination for food ; *meteorism* at first occasionnally, but afterwards it became constant. Several medical men were consulted, who gave various opinions without being right. Portal's opinion was that, the absence of the menses was the principal cause of her complaint, and it was to this end he directed their attention. But they all recommended tonics; this treatment was pursued for some time without any beneficial result, the lower extremities swelled and became œdematous; increased meteorism and pains in the abdomen succeeded.

When Portal's advice was followed, the menses appeared and flowed freely, meteorism ceased, the

swellings of the lower extremities decreased and ceased entirely. A second discharge of the menses taking place, all the symptoms of the disease ceased and the young lady was cured.

The symptom I call meteorism is not unfrequent among girls, principally when they are weak and affected with dispepsia.

Dr Bradley has considered the noise of the bowels as connected with the state of the spine.

This noise, says Dr Bradley, is for the most part similar to the croaking of a frog, especially on inspiration ; but on expiration it conveys an idea, as if the sound issued from water. This noise, says the said doctor, will increase in proportion to the distortion ; and as soon as the patient, from weakness, is incapacitated from remaining erect, it will frequently return, even while she remains in the horizontal position.

Dr Bradley illustrates by facts the close connexion of cause and effect between the spine and stridulous noise in the abdomen.

I confess that I have found commonly that stridulous noise, only when girls were or chlorotic or of a debilitated constitution, and there I found the noise without any symptom of deviation of the spine.

The borborygmus of hysterical females may be easily distinguished from the stridor abdominalis ; the former having a gurgling sound, which is perhaps more frequent when the patient is in bed, while the

latter is seldom perceptible in an horizontal posture, but when the patient is standing erect.

Although English medical works possess great merit, nearly all authors have neglected to treat on amenorrhea resulting from the influence of another disease. It is evident that if all serious diseases stop or accelerate growth, they must also have the power of retarding the menses or of stopping them, when they have appeared, for in girls they are the proof of complete growth.

Dr Brière de Boismont, however, in the best monography extant on menstruation, has supplied the deficiency, left by others authors, and although he does not consider the menses as immediately connected with growth, his researches possess so much practical interest that I shall quote some observations made by this talented man.

There is no acute affection, he observes, that does not occasion the diminution, the irregularity or the suppression of the menses. I would add to what this clever author has adduced, that every disease, ague or chronic, has the power of impeding growth and consequently retarding the appearance of the menses.

Pneumonia, pleurisy, and consumption, too often takes place, when the menstrual flux does not flow at the natural time. The principal causes that produce amenorrhea are both physical and moral. Among the physical causes, we may say, that what-

ever impedes growth, impedes the menses or stops them in their course. Cold frequently causes amenorrhea. The menses may be stopped by immersing the hands, feet or body in cold water; leaving off a garment she may have been accustomed to wear; taking cold when in a perspiration produce the same results. Fatigue, bad food, an unhealthy residence, in fact every circumstance where physical education has been neglected, causes amenorrhea, because they stop growth. These facts are of the highest importance, as they serve as a lesson for young girls.

Moral as well as physical causes occasion amenorrhea. To how many might be applied the beautiful lines of Shakespear.

> She never told her love,
> But let concealment, like a worm in the bud
> Prey on her damask cheek.

The comparison of a worm in a bud is well applied to girls affected of green sickness or chlorosis from moral pains.

The duration of pain is so strongly rooted in the mind and the heart of some girls, that nothing in the world appears capable of taking it off. How eloquently the greatest of the English poets expresses the sorrow of the heart and mind. The difficulty of attending to it

> " Pluck from the memory a rooted sorrow
> " Raze out the written troubles of the brain;

" Cleanse the stuff'd bosom of that perilous stuff
" Which weigh upon the heart. "

Strong passions have great influence on the organisation. Children may become idiots by a fright. Epilepsy is not uncommonly caused by some strong impression : — in girls amenorrhea or suppression is frequently met with from some moral cause. When suppression exists, then this effect becomes cause of other effects and occasions other diseases. The girl coughs, complain of pain in the side, spits blood, or complains of suffocation , pain and difficulty of breathing ; — sometimes of giddiness, vertigo, headache, buzzing noise in the ears.

I like to relate cases, because they exemplify the principles I have laid down, or they show the results of the importance of growth, in relation to the catamenial functions.

CASE XXVII.

AMENORRHEA ; DEVIATION OF THE VERTEBRAL COLUMN.

Miss C. was of delicate constitution and of a nervous temperament. She had suffered from chlorosis and hysteria; when at the age of seventeen, the menses appeared. Her health improved, and the deviated spine gradually and progressively straightened. The second appearance of the menses came

naturally, when on the second day, she received a violent blow on her right breast. Excessive pain, sudden fright stopped in her the course of nature. She complained of headache, of an inclination for sleep, and loss of appetite. The hysterical fits returned the following month, when the menses should have appeared, she felt increased pains and fever.— Improper means were employed, and at the end of the second month, she had violent hemorrhage that lasted twenty eight days. We may imagine the weak state to which the patient was reduced. Nourishing food soon restored her lost strength; the menses became regular and the young lady was cured.

CASE XXVIII.

AMENORRHEA FORM MORAL CAUSES.

A young girl, handsome and well made, about 16 years of age, had the first appearance of the menses at fifteen. At the time of the last discharge, she had violent grief which brought on hemorrhage, swoonings and shivers. The next month, the discharge was slight, but the swooning and shivering subsided after a few days, and the menses entirely ceased for several months. Convulsions ensued, four months after the accident occurred, she was

bled, and remained a month without eating or drinking. Nutritive and strengthening injections were employed. They endeavoured to make her take food and drink, but they were prevented by the constriction of the œsophagus ; after four weeks abstinence, amaurosis and deafness ; she recognized only by feeling. She remained in that state during a month, when her sight and hearing returned. She began to take food and drink, but after having taken them, she became delirious, then reasonable again. They tried to make her take food a second time; but the constriction of the œsophagus opposed the entrance of solid food.—Evidently she could not live : she died soon after from consumption.

Amenorrhea, like all suppression of hemorrhage, or habitual sanguine depletion, is one of the principal causes that developes the seed of serious diseases, according to the disposition of the individual. In girls of a plethoric or full habit, it is shown by inflammation in the organ most predominant. In those of a lymphatic constitution, by spinal deviations and the discharge of whites. In those of a nervous temperament, by occasionnal pains, gloomy ideas, changeableness, a disordered intellect, inordinate affections, feelings of hatred without any reason, and by partial and general convulsions.

When the *cause* which has brought on amenorrhea still remains and is not removed, there is (as in all other diseases) but little chance of success in its cure.

In practice, one important consideration is necessary, which is to discover whether amenorrhea be the *cause* or the *effect*; as the patient frequently, either willingly, or unwillingly conceals circumstances which would otherwise render the problem easy to solve to the medical man.

CASE XXIX.

AMENORRHEA.

A young lady 16 years of age, delicately constituted and of a nervous temperament, had been affected 5 months with amenorrhea; she also felt strong dyspnæa. Her health and spirits were much weakened and she became so ill, that her friends had ceased to hope for her recovery. She had consulted several medical men, but had experienced no relief. She was bled, which increased her weakness. Pills composed of myrrh and aloes taken regularly night and morning brought ou the menses, and with them her health was restored in less than two months. From the preceeding remarks, it is evident that the state of the intestines and lumbar nerves had not been attended to, but the success of the remedies employed proved the cause to be one of amenorrhea.

I cannot too often repeat that for girls, the appea-

rance of the menses is the completion of growth ; when the menses do not flow or are stopped in their course, the whole system becomes disordered, and we cannot be astonished that mothers, anxiously fear lest any irregularities should prevent this important discharge.

Medical men most frequently consulted for the diseases of young girls, should make themselves thoroughly intimately acquainted with the phenomena that relates to growth ; this knowledge is even more necessary, as the evolution of an organ during growth may come with the cure of disease that precedes it. Thus, as I have already remarked, the appearance of the menses is generally united as *cause* or effect in the radical cure of diseases that have resisted medical art. In order to prove the truth of these assertions, I will again cite some observations.

CASE XXX.

DISEASE CURED BY MENSTRUATION.

Leonie was a thin and fair girl, in the enjoyment of good health. Her father had long suffered from chronic rheumatism. In the month of june 1826, when Leonie was 11 years of age, she was seized during the night with violent pains in the knees and legs, which came and went at different periods. In

february 1828, two years afterwards, she felt acute pains in the loins, arms, and right knee ; during the night pains in the bones, which prevented her from sleeping.

Dr Gendrin was consulted : he found the knees very much swollen, and painful when touched. He prescribed emollient lotions, and sulphnr baths. She however still continued to suffer from *osteocope* pains and swelling in the knees until the month of june. When for the first time the menses appeared, she felt immediate relief, and after the second discharge of the menses, she was perfectly cured.

CASE XXXI.

VIOLENT PAINS CURED BY MENSTRUATION.

Pauline C.... was born of healthy parents ; she was thin, tall, dark, and of a very happy and lively disposition. At the age of 12, she was seized during the night with violent cramp. Whilst suffering from these pains, which lasted five or six months, Pauline grew rapidly. In the winter of the year 1820, the pains left her until the spring of 1821, when they came on again but so slightly, that they were called growing pains and no medical advice was sought.

Her breath, and perspiration became fetid, and a mist came over her eyes. She grew uneasy and

thoughtful, but her general health remained good. In the month of june, during the night, violent *osteocope* pains, and wakefulness. Dr Gendrin recommended river baths, which gave her some relief. In the month of july, lumbar pains, slight cephalalgy, the head heavy, and for several days the pulse febrile at night. On the 11th of july, the *osteocope* pains ceased and during two nights she had profuse perspiration. On the evening of the 14th, she became insensible for a short time, a slight fever succeeded during the night, the menses appeared, the pains ceased, and she has been well ever since.

The appearance of the menses, has a most happy influence over the diseases of young girls. It is not only a sign of their radical cure, but in a number of instances it produces marked change in their organisation. How many delicate and unhealthy young girls, observes Dr Boismont (whom I have already quoted), subject to diseases more or less painful, and very often serious from their nature or length, seem to be brought to a new life when the menses appear; their thin, pale, and sallow faces, become round and firm; and the harsh lines of their figure, change gradually into graceful and polished curves, and the expression of suffering quickly disappears. The influence the menses have in the solution of diseases, has even been remarked by the ancients : « multa morborum feminarum genera, primo mense, solvuntur » said Pliny.

CASE XXXII.

AMENORRHEA. — SYMPTOMATIC.

Alexandrina, aged 18, was of a constitution eminently lymphatic, she had been sickly from her childhood, and had been brought up, in the country with very poor people. She was 12 years of age, when her mother (an unmarried woman) took her from this wretched state, and pure air, wholesome and plentiful food, together with cleanliness, seemed to revive this drooping young girl. Her figure rapidly developed and she attained five feet (French) in height. Her face remained pale, and although now become an object of tender sollicitude, she was always sad, and this state of melancholy seemed to increase after her mother's death.

She was 16 when the menses first appeared, and then not very abundantly; soon they ceased to flow, when after an interval of 8 months, they appeared again, and again after a lapse of 10 months. She had not seen her menses for 6 months, when she went to an establishment of health. (Maison de santé.)

A difficulty in breathing to which she was subject had increased during the last year, frequently accompanied by violent palpitations, and swoonings. For several months swallowing became painful, and difficult, the face still remained pale, the eye-lids, and different parts of the body swollen; whilst stand-

ing the feet also swelled. The pulse was low and intermittent, beating from 90 to a 100 a minute. In spite of the greatest care, and the most judicious medical treatment, Alexandrina died 4 months after she had entered the establishment. Does not this case plainly shew the character of suppressed growth? and afterwards its too rapid developement, likewise the effect of moral suffering and neglected Physical Education?

CASE XXXIII.

AMENORRHEA. — FROM MORAL CAUSES.

A young lady caused her family great anxiety owing to a tendency she had to a disease of the lungs, but by proper treatment and unremitting care for many years, their fears had subsided when news arrived of the death of her brother, which she took so violently to heart, that her menses stopped and all the symptoms of her old complaint returned stronger than ever, accompanied by cough, extreme thinness and profuse perspiration; she was in eminent danger. Judicious treatment, a journey in a warmer climate produced the desired effect; the menses became regular, and the young lady got cured.

When the menses begin to flow, all glandulous swellings in the neck, and other parts of the body disappear, the joints strengthen, and the suppuration of the ears ceases; soreness of the eyes,

constant and intermittent fevers are cured, when the blood discharges regularly. The beneficial effect of the menses is evident in various other cases; in stopping hemorrhage, in stopping the incontinence of urine, dropsy, and *œdema* of the legs, and in a great number of cutaneous diseases. We have frequently seen, observes Dr B. de Boismont, diseases of the skin, which for years have been incurable, entirely disappear, with the discharge of the menses.

Again the beneficial influence of the menses has been known in nervous affections. The annals of medicine relate many interesting examples of young girls affected with epilepsy, who have been perfectly cured of these frightful fits, after the first discharge of the menses. Dr B. de Boismont cites the following case, as a most curious example of this kind.

CASE XXXIV.

EPYLEPSY CURED BY MENSTRUATION.

A young girl about 16 years of age, well made, of a lymphatic nervous temperament, of a good constitution was seized with St Vitus Dance. Every limb of her body was in perpetual movement, her chin striking her breast, and her arms and legs swinging to and fro a hundred times in a minute. To these varied movements succeeded immobility. They

were obliged to wad the room, where she usually sat, and remove every article of furniture lest she should hurt herself. Various treatments were employed without beneficial results, when unexpectedly the menses appeared and the convulsive movements ceased.

We must here remark, that at the time of puberty, hereditary diseases begin first to appear, more especially consumption. Another disease to which young girls are frequently subject, and which precedes, accompanies and sometimes supplies the place of the menses, is a disease called leucorrhea, known in England as the *whites*. When it appears in girls approaching puberty, it may be considered as the forerunner of the menses; and it seems as if nature prepared it before she produces a complete discharge.

Girls of a lymphatic temperament, delicate and fair are mostly subject to leucorrhea; — when it takes place before the menses flow, it generally delays them; the *whites* considered under this head are symptoms of impeded growth. Young girls coming to reside in large towns are subject to a suppression of the menses, and have a discharge of the whites instead.

In a work on leucorrhea, which I published in 1834, I have pointed out the errors of considering this disease of minor importance.

I then stated an opinion that I find correct after

twelve years practice and experience in the treatment of this disease, which opinion is, that leucorrhea is invariably only the *symptom* of a disease. The whites are an *effect*, for their treatment and curé we must trace their *cause*. These causes are very numerous, and amongst them we must class the most formidable diseases of the womb.

The whites require careful consideration, as they cannot exist without weakening the young patient, and for this reason only they ought to be treated during the critical period of growth.

I purposely omit to make further observations. I have already remarked the influence acute and chronic diseases have on the menses, and I could easily enlarge on this subject, for the influence of diseases connected with the menses is incontestable.

Amongst the serious diseases, which frequently attack young girls, and have a marked influence over the menses, none is so evident as consumption. Disease of the lungs, inflammation and consumption are generally occasioned by the suppression of the menses (in women). Consumption is a serious, and generally speaking a fatal disease, so that, when the menses do not appear, or are suppressed in a girl passing from youth to womanhood, with any pulmonary affection, I am of opinion that parents and physicians, cannot too seriously give their attention to this function, which in many instances serves as

a primitive cause for the irritation of the lungs. But I must leave this subject which would otherwise take me beyond the limits of this work.

DYSMENORRHEA.

I have spoken of the menses not appearing at the period of puberty and likewise of their suppression, I have now to treat of dysmenorrhea, or the painful and difficult emission of the menses.

This disorder is likewise manifest at the period of puberty, when a young girl, not unfrequently sees the menses appear, cease, and reappear irregularly, and with great pain.

This state, which may be called disease, is more frequent in large cities, and amongst the higher classes, for which there are moral and physical causes. It is not unfrequently hereditary, that is to say, the mother may have suffered dysmenorrhea, which very frequently is transmitted to the daughter. Dysmenorrhea generally takes place a few days before the appearance of the menses, and is known by pains in the loins, occasional bowel complaints, sometimes of long duration and felt all over the abdomen; and the patient not unfrequently has to contend with weakness in the legs. There are nearly always symptoms of dyspepsia, cephalalgy, vertigo, palpitations of the heart and *nevralgic* pains

in the breast. In England, this case is very common, especially among girls who lead a sedentary life.

From medical accounts, this disease is also frequent in the convents of nuns; amongst the greater number of them, menstruation is very irregular, they suffer from weak digestion and often have dyspeptic pains. Supplementary hemorrhages and consumption is also very common among them. In one of the provinces, Dr Pidou informs us that he has known young nuns die in less than a year of consumption. Diseases of the skin, issues natural or medical are frequent amongst them; hysteria affects them, and as they do not fall early victims to consumption, and their constitution becomes accustomed to so unnatural a life, they live very long but are always sickly, and suffering.

In England where it frequently happens that young ladies remain unmarried from choice, or from an early disappointment in their affections, or reverse of fortune, they suffer the same as the nuns. With this difference only, that those who take air and exercice suffer less. Yet dysmenorrhea may be considered as a disease to which girls are subject before and after puberty. It is divided in nevralgic and inflammatory. It results chiefly from cold, painful and sudden emotions, especially at the time the menses flow.

Nervous dysmenorrhea generally attacks girls :

inflammatory dysmenorrhea attacks both girls and women, but the causes are not precisely the same.

According to Dr Lisfranc, who has made the diseases of women the subject of his peculiar studies and of his constant practice, dysmenorrhea is frequently an hereditary disease : if you question your patient, says this talented surgeon, you will find that among the females their mother or grandmother were suffering from dysmenorrhea, or difficult menstruation. In these cases, dysmenorrhea is connected intimately with the state of the constitution and requires a peculiar attendance. In high life, dysmenorrhea is more frequent than among the common people; want of exercice and of exertion leads to the inactivity of the womb as well as to the inactivity of the other organs. Ladies in high life, lose in common health what they gain in exquisite sensibility or nervousness. The most trifling noise, or excitement suffices to cause trouble and sometimes disorder in their nervous system, and as the womb remains irritable in them as well as in all other females, it then becomes the seat of functional disorders.

Independently of the pains caused by dysmenorrhea or difficult and *stormy* menstruation, (as Lisfranc calls it,) it is to be feared that if neglected, it prepares the womb for the most serious and fatal diseases.

Dysmenorrhea or difficult menstruation is some-

times the symptom of a material disorder in the state of the womb; and of course requires particular care.

Again I say, that in high life, difficult menstruation has the character of a nevralgia and may be sometimes mistaken for rheumatism or a nevralgic affection.

M. J. Cloquet quotes the following case.

CASE XXXV.

DYSMENORRHEA.

Miss *** of a nervous constitution felt every month intense pains during many hours before the appearance of her menses; the pains were so violent that the patient had convulsions, she rolled in her bed from pain, and was pale and depressed. Several physicians attended her without success, all the means that had been employed were fruitless. When M. Cloquet, was called in; he treated her complaint, as nervous dysmenorrhea, and completely cured her.

The monthly paroxysms, says Churchill, present all the characteristics of nevralgia: for a day or so previously, there is a sense of general uneasiness, a deep-seated feeling of cold, or as a patient described it, the very bones of the extremities feel icy cold.

Headache may precede the flow of the menses, or succeed to it; and I have sometimes seen the headache alternate regularly with the pain in the back. The latter pain commences in the region of the sacrum, and extends round the lower part of the abdomen and down the thighs. In some cases it is constant, without any remission; in others, it occurs in paroxysms, with intervals of ease. The amount of suffering varies much, after a longer or a shorter time, the menses appear; sometimes slowly and scantily, at others in slight gushes, and not unfrequently the discharge is paler or mixed with clots.

The eruption of the menses, is not immediately followed by the relief of the pain, as in the inflammatory dysmenorrhea, but it subsides gradually, alternating sometimes with nevralgic pains, as in the face, teeth, etc. There is no feverishness, each attack may last from 24 hours to four or five days, after which the patient speedily recovers, yet I must say that I have seen female patients liable to headache, to pain in the back and in which the general health was seriously deteriorated.

Inflammatory dysmenorrhea differs widely from the dysmenorrhea I have just described, it occurs in females of full habit, and of a sanguine temperament. Few symptoms announce the attack by a degree of restlessness, and feverishness, rigors and flushing and generally headache precede the severe symptoms.

The patient complains of pain across the back, aching of the limbs, weariness, intolerance of light and sound; the face is flushed, the skin hot, and the pulse, full bounding and quick; cases not unfrequently occur in which the fever runs so high that delirium supervenes for a short time.

Most generally the symptoms are mitigated when menstruation is fully established, and then by degrees, all the disturbance subsides.

The american physician Dewees has noticed a remarkable symptom accompanying that variety, viz. the tumefaction of the breasts.

For the two species of dysmenorrhea, in young females, the best means employed are all the agents recommended in physical education, in other words, all that can tend to regulate growth and to favour it.

MENORRHAGIA. — EXCESSIVE MENSTRUATION.

Excessive menstruation is rare among young females, when it exists it may be considered as hemorrhage.

Uterine hemorrhage may exist in young females, even before the time of menstruation, it lasts only one or two days. It is generally followed by great debility; the girl becomes pale, her eyes are sunk, her flesh is flaccid, and she complains of pains in the limbs.

That species of menorrhagia is caused by the precocious developement of the womb; sometimes it terminates in disease.

Hereditary predisposition is frequently met with in young ladies affected by that precocious discharge. Dr Gendrin relates the history of a family, where all the girls had discharges of blood, from six to eight years old.

When an hemorrhage happens at the epoch of womanhood among girls, it may be without danger, for it is not rare that it ceases after a few days, and the girl remains regular; but when it happens before the time of puberty, although the discharge is not abundant, it debilitates the young patient excessively and she generally becomes thin and emaciated.

It must always be remembered that the blood, is the life of the flesh, that no growth can exist without blood; the time appointed, in which nature indicates that the full growth of a female is attained, must be considered with the greatest attention; young patients want blood, not only to remain in their state but to grow, and if they lose it, growth is arrested and the constitution impaired.

If the hemorrhage is not stopped in time, exhaustion arises with all its symptoms. Languor increases, the face is pale, there is weakness or pain across the loins and legs, headaches, throbbing of the temples, giddiness; in some extreme but rare cases, says Churchill, there is diarrhea and anasarca with

nervous symptoms, as melancholy, epilepsy, mania.

If the discharge is not stopped, not unfrequently the patient is affected with marasmus, dies from a disease very much resembling that described by Dr M. Hall, under the name of hydrencephaloïd disease.

Nevertheless, at the epoch of womanhood, the monthly discharges are so much in the designs of nature, that if it does not take place in following its natural channel, it is very often replaced by a loss of blood from another organ, or by the discharge of whites. The first is called aberration of nature, the second is considered as a kind of supplementary crisis.

VICARIOUS MENSTRUATION.

Any drain upon the constitution as a large bleeding, may supplant the menstrual discharges. It is known to have taken place, from the nostrils, eyes, ears, gums, lungs, stomach, arms, nipples, the end of the fingers and toes, from the surface of the skin, etc., etc.

The more extensive mucous membranes, pulmonary and intestinal are the most ordinary seats of the disease.

Dr Blundell mentions that a case occurred in St Thomas hospital, in which there was every three

weeks, for at least three times in succession a discharge from a sore on the hand, in place of a discharge from the uterus, observing the same period to which the patient had been accustomed.

Dr Ashwell relates the case of a young patient in which the discharge occurred from the mammæ, and another from the ear; this last patient was a native of London, twelve years of age. She began to menstruate when eleven years and eight months old and was regular for three months, where the catamenia ceased, occasional hemoptysis and discharge of blood from both ears, vicariously occurred.

The discharge from the nose is more common.

CASE XXXVI.

VICARIOUS MENSTRUATION.

A young lady of a lymphatic constitution, 16 years old, had an hemorrhage from the nose. The hemorrhage appeared regularly every month, it lasted two or three days. Before its appearance, the extremity of the nose swelled, was red and itching. During three years, that hemorrhage appeared at stated times corresponding with the menstrual discharge in other females, when at the end of three years menstruation took its regular course and the loss of blood from the nose ceased.

CASE XXXVII.

VICARIOUS MENSTRUATION.

Another young lady had at the age of sixteen, some symptoms of menstruation, but instead of taking its regular course, she felt a pain in her mouth, there was a swelling on the gums of the right side; this swelling was followed by a loss of blood that lasted two or three days, and ceased only the next month when it appeared again and continued so during the monthly epochs.

She married, had a child, but the discharge did not take its regular course.

Arrived at her critical epoch, she had a disease which was followed by a deviation of the spinal column. She recovered from the deviation of the column, when the irregularity of the menses ceased.

Cases of vicarious menstruation are very numerous. The expectoration of blood is not rare in these instances and has led sometimes to suppose a different state of the lungs.

Whatever it may be, we must see these vicarious discharges as the previsions of nature and the proof that the superabundance of blood has an intended purpose, and that when that excess in the female economy does not follow its natural channel, it may deviate from its course to complicate other diseases.

LEUCORRHEA OR WHITES.

In 1834, I wrote an Essay on leucorrhea and I advanced an opinion that experience has corroborated by numerous facts. Leucorrhea or whites is a disease commonly neglected; the sense of delicacy attached to what relates to the generative organs, is probably the cause of the neglect of parents and of the patients themselves. If parents did see in the eyes of their daughters the discharge that sometimes affect the private organs, they would undoubtedly have recourse to medical science to attend to it.

In young females of delicate constitution, it is not uncommon to find a secretion of whites at one or two of the monthly periods preceding the developement of the catamenia and vicarious to them.

The existence of whites in girls before menstruation must not be neglected. It shows their constitutional predisposition, and may be considered also as a symptom of great weakness.

Leucorrhea or whites, in girls not yet menstruated, stops the appearance of that monthly discharge. It prevents growth, and consequently deserves to be taken into account in considering the state of girls. It may be said, and Dr Boismond is of the same opinion, that menstruation is retarded by whites. It

follows that to help growth in its course, whites must be attended to in girls.

Whites stop growth, and when the discharge is abundant they debilitate the girls as much as if they lost blood.

I shall not relate cases, in order to limit the extent of this book ; it is sufficient for my purpose to call the attention of reflective men on the influence of whites to stop growth and to complicate nearly all diseases of the generative organs among females. Whites are generally but the symptom of a disease, they must lead the practical man to the cause that produces them. In girls, before puberty is established, whites may be the result of an attempt of nature to produce the catamenial discharge, but the young girls being debilitated by some cause, the discharge of whites may be considered as the symptom of some disorder of growth. It is in that light, that must be considered the opinion of authors, who have said, that whites prevent menstruation and stop growth. Whites is a disease, it is an effect, and when it has been said that whites stop growth, it means only that growth is generally stopped in girls having whites ; and that there is in their state something wrong that requires the assistance of the medical advices.

If I resume what I have said on menstruation, I acknowledge that this function is the indication of the complete developement of females. It is the end of

their growth. Nature seems to have done for the individual all she wants, the last function that is given to woman, is relating to the species.

But as the individual could not be a proper stock from which other should spring, unless she should be completed in her organisation, it follows, that a young female is not proper to become a young mother, unless she enjoys perfect health and unless the catamenial functions that shall regulate it, should be normal and complete; the general rule is such.

If we consider now the relation of the womb with the spinal marrow and the state of the spinal column, we find that the influence of the spinal nerves is greater than has been suspected; and from that knowledge, we arrive at the conclusion that it is not attending young ladies in a rational way, when for spinal deviations, mechanical means are employed with the same blindness as if the spinal column of a living being, could be compared to a piece of wood or of iron, to which physical strength can be applied without danger.

It is a fact beyond doubt that in some orthopedic establishments girls have menstruated during the treatment, others have ceased to do so. None of the orthopedists have alleged any reason for that particularity. But although they have not shown that they understood the cause of that different effect on girls, and that they have only noticed the fact, as even the most ignorant could do, it is not

less right to acknowledge that the extension and the straightening of the spinal column has an effect on the womb. That is sufficient for the present thesis. The state of the spinal column and of the spinal nerves have an influence on the functions of the womb. In surgery, innumerable facts prove that influence of the spinal nerves on the internal organs; and I shall quote one more case, as a complement of what I said of the influence of the spinal and sacro lumbar nerves on the internal organ.

The celebrated Dr Gooch gave enlightened attention to the diseases of the womb, and it is the opinion of M. Stanley, that this talented physician attributed the irritability of the uterus to the spinal nerves.

CASE XXXVIII.

IRRITABILITY OF THE UTERUS.

In 1840, while practising in London, I was called to attend a young lady. She was 25 years old. She had undergone every kind of treatment under several physicians. This young lady complained constantly of pains in the womb; Dr Ashwell was called in consultation. From the conversation of the young lady he thought, as I did, that there was

some disorder of the womb. He practiced the *toucher* in order to ascertain the state of that organ, and found it presented no alteration of any kind. We gave the patient some anodyne preparation. I continued to see her, and it occurred to me that those constant pains in the womb, might depend on some affection of the spinal nerves. My attention being drawn to that point, I examined the spinal column and found the lower part of the back sensible on pressure. I directed my therapeutical means according to that new state of the disease, and I had the pleasure of seeing this young lady improve, and restored to health completely by the air and baths at the sea side.

CASE XXXIX.

IRRITABILITY OF THE BLADDER.

Charlotte Seping, 25 years old was admitted in S^{t} Bartholomew's hospital. She complained of the following symptoms : pains and tenderness in the side. Urine was scanty and voided with great pain. She stated she had been ill for a month, and that at the beginning of her illness, after straining to empty the bladder, she felt the sensation of something giving way in her side and immediately

a tea cup full of blood passed. She suffered most severely from pain in the bladder. From the suspicion there might be a stone in it, she was sounded by M. Abernethy, who pronounced there was no stone, but that the bladder was very irritated. Every form of medecine that was likely to relieve the irritation of the bladder, was tried, but ineffectually; her suffering continued, the pain in the bladder was excessive; there was also a severe pain in the lower part of the back. On examining the spine, acute tenderness was discovered in the spinous process of the lower lumbar vertebræ, and an issue was accordingly made in this situation. As soon as the discharge from the issue, commenced, her sufferings began to subside, the bladder became gradually tranquil, and in about a month she left the hospital perfectly well, and it was afterwards ascertained that she had no return of the complaint.

M. Stanley made very judicious remarks on this case. How many times, said he, in cases of nevralgia, there is no visible derangement of structure, or other local cause of excitement, where it will be difficult to determine whether the source of irritation be in the affected nerves, or in the central nervous portion, whence they are derived. In one case of nevralgia affecting the nerves of the thigh, after ten years of severe suffering, the patient died and upon dissection, with a perfectly healthy condition of every other organ, the lumbar portion of the spinal chord,

on its posterior surface, was found covered with numerous large, but thin plates of cártilaginous substances deposited in the arachnoïd membrane.

M. Stanley quotes other instances in which the disease of the kidney was the result of a morbid state of the spinal chord.

The immense and frequent influence of the spinal nerves is not sufficiently attended to, with the chest, the heart, the kidneys, the bladder. This fact is beyond question. It is so with the nerves of the lumbar region, as with the spinal nerves of the other parts. All have a powerful influence on the organs to which they reach and terminate.

In a work written by Dr Griffith, he has related many cases proving the influence of the spinal nerves to produce different diseases, that authors have very often mistaken for organic diseases.

He has proved that in cases when the upper part of the vertebral column was affected, patients complained of headache, face-ache, cough, pain of the stomach, nausea and vomiting.

When the cervical and dorsal vertebræ presented any tenderness in addition to the fore-going symptoms, there was pain of the stomach and sides, pyrosis, dyspepsia, palpitation of the heart and oppression.

In cases, when there was only dorsal tenderness, the pain in the stomach and side, cough, oppression,

fits of fainting, hiccup, nausea, vomiting were the most constant manifestations.

When the dorsal and lumbar vertebræ were affected, with the symptoms expressed in connexion with the affection of the dorsal nerves, there were pains in the adomen, the loins, the hips, the lower extremities, dysury, ischury, or a disposition to paralysis.

In fact each affection was corresponding with a peculiar spot of tenderness of the spinal column.

Tenderness or affection of the cervical part of the spinal column produced disorders of the upper part of the body.

The dorsal part of the spine, corresponded with the chest and the abdomen.

The lumbar part of the spine, corresponded with the bladder, the womb, the lower extremities.

But what is particularly striking, and what results from facts is this : in 148 cases 26 only were males. 49 married women and 73 girls. So that the diseases the most common caused by a morbid state of the spine, are diseases of girls.

When Dr Griffiith collected his cases, he certainly did not know what inferences I should draw. These 73 girls were affected with headache ; pains in the face, cough, oppression, palpitation of the heart, pain in the side, dyspepsia, nausea, vomiting, pains in the womb, in the bladder, constipation, hysteria, and chlorosis. In all these, the diseases had been more

or less mistaken, for all of them, were depending on the state of the spinal chord contained in the vertebral column.

I had the curiosity to examine what was the state of menstruation in these 73 girls. And I found that, 60 out of the 73 had different disorders or irregularities of menstruation.

In some, the menses had not appeared, in some others they were suppressed, in few they were profuse, in the greatest part they were irregular, difficult. So that amenorrhea which is absence or suppression of menses, and dysmenorrhea that signifies irregularity and suppression are the most common symptoms of diseases of the spine.

But why in 148 cases, are there 73 cases belonging to girls? Because girls are growing, because in many of them the growth of the body was not completed, and as it is perfectly well known that from ten to twenty is the time in which the spinal column elongates, it is in that time that diseases of the spinal chord are naturally more common.

It is a general rule of nature, and observation proves it, that an organ is liable to be diseased in proportion to the part of activity it takes in life, not that the normal function produces disease, but because, generally speaking, there is some irregularity in the function, irregularity that comes from menstruation. In youth the spinal column of young ladies, is more often diseased, because young ladies

are victims to some prejudices of fashion, victims of errors of their physical and moral education.

We are so dreadfully ignorant of every thing relating to our human economy, that we fall every day into the most fatal errors. Consider what a host of diseases is the result of cold, of stopped perspiration? Yet who tries to know the importance of perspiration? In high life, it is considered as a vulgarity, as if we could live without perspiring; to eat, to drink, to satisfy the most important wants is a vulgarity, and of course to think of the monthly discharge is a vulgarity; we may carry our mind in the clouds, but we do belong to the earth, and our fancy does not change our nature. Willingly or unwillingly we are animals, endowed certainly with a divine soul, but the soul wants its home to be regulated.

People do not understand enough how much the soul owes of its independance and comfort to the healthy state of the body. Goldsmith said that the temper of a woman is generally formed from the turn of her features; I do not entirely agree with him, but I say that the state of her health has a great influence on her temper.

I feel great temptation to let my pen run freely on a subject that has so many connexions with the object of my favorite study, education in all its bearings.

Let us return, to what I said, on the influence of spinal diseases during growth.

Spinal diseases explain nearly all nervous affections of females, and it is no wonder that they may have an effect on their tempers, when we know that the spinal chord is only a prolongation of the brain.

It is a fact perfectly known by those who have observed young females, that they are at times very fanciful. Dr Hall calls that state *temper disease*, it is, says that ingenious physician, an aberration of intellect, a short insanity. It frequently has its origin in dyspepsia, hysteria and in emotions of various kinds, such as disappointment, vexations, etc.; it is, a perpetual morbid and jealous thirst : an *ego mania*.

One patient cannot articulate : another cannot walk ; a third cannot eat, cannot swallow, or, if deglutition has been performed, does not retain the food in the stomach, but without nausea and apparently without effort, by an act of easy rumination.

I was consulted in the case of young lady who was affected with paroxism of a violent, apparently spasmodic action of the muscles which raise the left shoulder, attended by a partial inspiration.

In another young lady a similar apparently spasmodic action, more constant or less in paroxysm, affected the muscles which raised the right thigh.

In one patient the fingers were forcibly contracted into the palm of the hand ; in other cases

there are various forms of lameness; a young lady was affected with phtosis, another was unable to write except in zig zag forms like the effect of a real tremor.

Having thus sketched the case of temper disease in general terms, I hope not to be mistaken, says Dr Hall. I do not regard it entirely as a feigned disease, it is originally at least, the result of malady, as of some mental or bodily affection. It is allied to hysteria; and hysteria, histeric palpitation, for example, is a real disease, it is a perversity, an insaniola, originating *in bodily disorder* or mental affection, and perpetuated by a morbid indulgence of temper and desire for sympathy and attention.

The perversion of temper might be frequently controlled, but not as long at the bodily disorders in which it originates, will subsist : the mind in a sensitive young lady is seldom sound as long as the body is unsound. This lead us naturally to the numerous tribe of spinal affection, commonly known as spinal difformities.

SPINAL DEVIATIONS.

There is not a more frequent cause of *temper disease* than any deformity natural or acquired. "The temper of a woman," says Goldsmith, "is generally

formed from the turn of her features." Without admitting absolutely the vicar of Wakefield's observation, it is impossible to deny that there is some truth in it. Nothing causes to the mind so much peevishness, so much uneasiness as bad health. The mind loses its power and its strength. The intellect seems to have fetters. The heart itself, the heart which represents all moral qualities, the heart suffers from the state of the body; is it possible to be mild, sweet, equal, when the body suffers? Swift suffering left Pope's house, saying it was impossible for two friends ailing, to live together.

Equanimity of temper with a suffering body or with a deformed body is an exception but not a rule. "The body and the mind are so tightly bound together," says Montaigne, "that one cannot suffer without communicating suffering to the other."

"Whosoever," says Bacon, "hath any thing fixed in his person that doth induce contempt, has also a perpetual spur in himself to rescue and deliver himself from scorn; therefore all deformed persons are extremely bold; first as in their own defence as being exposed to scorn, but in process of time by general habit; although it stireth in them industry and especially of this kind to watch and observe the weakness of others, that they may have somewhat to repay again on their superiors; it quencheth jealousy towards them as persons, that they think they may at pleasure despise; and it layeth their compe-

titors and emulators asleep, as never believing they should be in possibility of advancement, till they see them in possession. So that upon the matter in a great wit, deformity is an advantage to rising."

Certainly Bacon's opinion is very favorable to deformities, but in the majority of cases, deformities have not the happy result of proving an advantage to rising. How can parents expect that a deformity should be, "an advantage to rising," when we see the greatest men suffering from those to which they were subject. Is it not known, that Cesar himself was ashamed to be bald, and felt the greatest satisfaction when the senate allowed him to wear a crown of laurel that hid his precocious baldness?

According to Shelley, no action of lord Byron's life, scarce a line he has written, but was influenced by his personal defect.

Moore says, that one of the few pages of lord Byrons memoranda, which related to his early days, was where in speaking of his own sensitiveness on the subject of his deformed foot, he described the feeling of horror when in one of her fits of passion, his mother called him a lame brat.

It is beyond doubt that to some minds, certain deformities are an incentive to distinction, but it is not generally so, and for many it is the cause of suffering and mortification. It is related that Pope one day asking the duke of Malborough, what was a point of interrogation, the great warrior answered

him scornfully : a little crooked thing, making impertinent questions ?

Shakespear describes with truth the bitterness of deformity, when he makes Richard III say :

" I, that am rudely stamp'd;
" I, that am curtail'd of this fair proportion;
" Cheated of feature by dissembling nature;
" Deform'd, unfinished, sent before my time
" Into this breathing world, scarce half made up;
" And that so lamely and unfashionable
" That dogs bark at me, as I halt by them."

Let us hear Byron himself in his deformed transformed.

" Nor thought to win,
" Though to a heart all love, what could not love me
" In turn, because of this vile crooked clog,
" Which makes me lonely. "

Pain of the body creates pain to the mind, and it would require a stoic virtue from girls, to appear agreable and good tempered when they suffer. Independently of physical pains, there are moral pains resulting from the prejudices of fashion. Young females are as proud of their figure as they are of their face; and if beauty attracts admiration, we must not be astonished that deformity induces, if not contempt, at least a pity hurtful to the feelings.

Spinal deviations are then not only a physical

deformity, but they have an influence on the temper, and in the interest of all education, deformity of the female figure must be attended to.

"The soul, says the Bishop of Hippone, is better in a handsome body." The Bishop of Atterbury said, in speaking of Pope, "that his mind was crooked, like his body."

After having sketched the most common diseases incidental to growth and shown their connexion with the state of the spinal marrow, I have to say a few words on the spinal deviations that are so prevalent among delicate females, when there is the least irregularity in growth.

All spinal deviations may be classed under two heads: deviations produced by the state of the constitution, and deviations produced by bad attitudes or accidents.

Spinal deviations commence generally as slight curvatures, and through neglect they become deformities. Spinal deviations that are caused by the constitutional state and some irregularity of growth require more than mechanics can effect. Spinal deviations caused by bad attitudes and habit may be benefitted by some mechanical apparatus; but among the machines the simplest, the less complicated are generally the best.

The greatest help to cure a spinal deviation, and the most surely successful, is the will of young patients. With that will, every thing will be easy,

without it, every thing will be difficult, attended with discomfort to the parents and ill success to the medical attendant.

Among the many young patients that I have attended in England, I find that my best success have always been prepared and secured by the *will* of the young patients. Where there was no will, there was but uncertainty in the results, partial and temporary improvements. Unless you place young ladies in such forced position that they cannot get out of it, your expectations will be frustrated; the *will* is the best instrument, for the young lady carries it always with her and there is not a movement of the body that cannot be controlled by her.

All systems employed for the treatment of spinal deviations have had some success, but I positively affirm that their success has been always favoured by the strong will of the young patients. Among many cases I shall relate one only, as a proof of what I advance.

CASE XL.

SPINAL DEVIATION.

Miss Ellen..., sixteen years old, was deviated; the curve was on the right side. The shoulder and the hip appeared larger and proeminent, the left shoul-

der was lower, and nearer the hip of the left side. When she was put under my care, I enquired minutily as to her moral dispositions; her mother told me that the young lady was of a strong mind; that was what I wanted; I had applied a few strings to remind the young lady of the state of the right side, and gave the necessary direction for her. I made her lie down, on her back, or on the convex side, so that she put a hard pillow under the right side. I had a large sling placed above a sofa, I ordered her to place herself on that sling, so that all the weight of her body should bear against the curvature. I ordered her also to take horse exercise and to have a peculiar saddle, so that instead of sitting on the right side, she sat on her left side and was consequently obliged to keep the left side of the body straight and forward; by following a plan so simple and apparently insignificant, this young lady was cured after twelve months rational attendance, and without any of the stretching machines applied in all orthopedic establishment. I can assure parents that in the majority of cases, all the arsenal of machines is useless; the attendance of a fond mother, of a watchful nurse or governess, with the good *will* of the young patient, will produce better effects than the most complicated apparatus.

Every apparatus that gives pain, seldom succeeds, for it is the instinctive feeling of nature to avoid pain; besides the maternal heart shrinks naturally

from treatment that can inflict torture on a child.

I am not prepared at this moment, in consequence of disapointement of the *wood cuts*, to give to my readers an account of my views and principles on the treatment and cure of spinal diseases and spinal deviations. The name of *Rational Orthopedy* fully indicates that all the means employed are marked by sound sense and experience. But in the present state of science, a man loses too often the fruit of his experience and of his discoveries the moment he gives his method to the public, and generally it occurs that the same method falling in inexperienced hands, or in the practice of ignorant men, loses its advantages. Yet it is no more possible to give my experience in the treatment and cure of spinal deviations, than it is possible to Sir Benjamin Brodie, and to Sir James Clarke, to impart their experience in a limited compass of few pages of printing. However, I will soon publish a separate account of my principles of *Rational Orthopedy*.

As to growth, I hope that parents will feel the necessity of attending to it during youth ; for, from the regularity of growth depends the state of health during the greatest part of life.

THE END.