Reports on the effects of a peculiar regimen on scirrhous tumours and cancerous ulcers / by William Lambe.

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REPORTS ON CANCER.

REPORTS

ON

THE EFFECTS

OF

A PECULIAR REGIMEN

ON

SCIRRHOUS TUMOURS

AND

CANCEROUS ULCERS.

BY

WILLIAM LAMBE, M.D.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS.

Ἅπανθ' ὁ μακρὸς καναρίθμητος χρόνος
φύει τ' ἄδηλα, ——————
κοὐκ ἔστ' ἄελπτον οὐδέν ;— SOPHOCLES.

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PREFACE.

IN presenting the following Reports to the world, I am little solicitous, whether the opinions advanced in them be wholly consistent with those contained in the works which I have formerly published. I only hope, that I have made nearer approaches to the order of nature in the production of human diseases, and have given more satisfactory evidence with regard to their causes. Till these are completely ascertained, the art of medicine, it is obvious, may, in a multitude of instances, be employed in the hopeless and sickening attempt to counteract the necessary and irresistible laws of nature.

I presume the evidence, I now offer, on the production of Cancer, will, at least, procure for the treatment, which I have proposed, a fair and regular trial. If so, the object of all my labours will be fully answered; and on the event I am willing to rest my own claims to

the good opinion of mankind. And I again solicit professional men, or others, to favour me with an account of any facts on the subject, with which they shall become acquainted.

I have been far from insensible to the treatment which my past labours have experienced from some, whose opinions have considerable influence on the public judgment.* But I

* A writer in the British Critic, in particular, violated all decency, in reviewing the work, to which this is a supplement. The proposal contained in it was compared to the metallic tractors; and, of course, the motives of the proposers were put upon the same level. Dr. Beddoes too, in his "Manual of Health," has done his utmost to ridicule both my former works, though he has not scrupled to borrow from the "Researches" without acknowledgment. Of the Cases, he says, "nor have I met with feebler support to "any newly proposed remedy." For the simplest of all reasons, truly:—because I would not exaggerate. It would have been well for the reputation of Dr. Beddoes, had he followed the same rule. But this remark was made, after I had given my positive testimony, supported by that of three other professional gentlemen, that distilled water alone had prevented the spreading of a cancerous ulcer, and had kept it perfectly stationary for eight successive months! It is now more than three years and a half, since I shewed this fact to Mr. Abernethy.

shall answer only by continuing to accumulate facts, and by continuing to present to the public what I may think most interesting and important. If any of these gentlemen will take a twentieth part of the trouble, that I have done, to refute, by experiment, what I, by experiment, have laboured to establish, I will acknowledge myself to be under the greatest obligations to them; and shall require nothing but veracity in their statements, for the public to judge between us.

W. L.

King's Road, Bedford-Row,
1st January, 1809.

REPORTS ON CANCER.

ALMOST four years have elapsed, since I offered to the public my opinion on the origin of some diseases, which have at all times eluded the powers of medicine; and endeavoured to demonstrate that the water, which we habitually use, is a principal agent in the production of them. I cannot repent of the efforts I at that time made to establish this opinion, since I was fully persuaded of its truth; and I trust that the facts, which I am now about to relate, will evince that it was neither hastily nor inconsiderately adopted. They will, I am persuaded, be strong enough to convince those, whose minds are not equally shut to argument and the evidence of the senses, that whatever care be taken in the other parts of diet, however strictly every rule be observed of prudence and temperance in the conduct of life; still, if common water

be habitually introduced into the system, great and obstinate diseases will inevitably arise, and human life will be infallibly abbreviated.

If this statement be correct, it must directly follow, that the custom of constantly introducing fluid matter into the body, so far from being a useful and a natural habit, is, on the contrary, a noxious, and therefore an unnatural one. To drink is, both in popular estimation, and by medical and philosophical authors, deemed an action as essential to life as to eat; and many theoretical reasons have been given to explain its utility; and, as has been supposed, to evince its absolute necessity to our healthy existence. Fluid matter has been thought necessary to dilute the blood; to temper the acrimony, or correct the viscidity of the fluids; to wash out noxious matter from the vessels; or to supply the stomach with a solvent; qualities, which are all of them obviously gratuitous and hypothetical. That it quenches thirst cannot be disputed. But it may be fairly questioned, whether this thirst itself be not a morbid sensation, arising in part from an unnatural diet, and in part

kept up by the very means which are used to allay it. It is certain, at least, that persons have lived healthy, who have wholly abstained from drinking; and some, particularly dropsical subjects, have freed themselves from the sensation of thirst by practising a similar abstinence.* However rare these examples may be, they are sufficient to make us doubt concerning the absolute necessity of using any liquids at all. I wish not in this place to pursue this subject any further, intending to confine myself principally to a plain statement of facts. But I have found that one of the strongest objections, in the minds of many sensible and well informed persons, against my proposal of introducing the use of pure distilled water in the treatment of chronic diseases, has been, that the practice seems wholly unnatural. If they can once bring themselves to suspect, that the practice of all drinking whatever is equally unnatural, a strong prejudice will be removed; and they will more readily comprehend, that if an unnatural habit be at all indulged, especial care should be taken to prevent it from being likewise a noxious one.

* HALLER. Element. Physiolog. Lib. xix. Sect. 2.

But though I have not seen any reason to alter the opinions I advanced in my "Inquiry into the Symptoms, Causes, and Cure of Constitutional Diseases;" but, on the contrary, have had some examples of its truth, more striking than any which I have related in that work; a more prolonged experience has shown to me, that the method I then proposed for the treatment of chronic diseases was imperfect, and inadequate to the end proposed. In the first cases that I treated, though the relief of some of the symptoms was beyond expectation, others continued with unabating obstinacy, and afterwards were found to increase in severity; in others, again, the advantage gained seemed only temporary. I was at first inclined to attribute the little effect produced upon a certain order of symptoms to a want of due perseverance in the plan laid down; but, at length, I found myself obliged to renounce this hypothesis. And now I am very ready to acknowledge, that I have known epilepsy continue its course with unabated violence during a course of distilled water; that gouty paroxysms have recurred, though their accustomed periods have been interrupted, and their violence much mitigated;

that consumptive symptoms, that painful affections of the head, that even mania has made its first appearance, under circumstances, where I have reason to believe that the course of pure water had been very steadily adhered to.

But these facts, however discouraging, could by no means subvert and nullify the very obvious and evident advantages derived from the use of pure liquids: above all, it could not overturn that very striking and remarkable fact, that a cancerous ulcer, which had been spreading for five months, became immediately stationary upon using distilled water; and, as it subsequently appeared, continued so till the last moment of life. In this observation, which has now been repeated so often, that I doubt not, but that, with certain limitations of age, it will prove uniformly true, it was impossible to attribute any thing to fancy, or to that species of self-deception that men are apt to indulge in, who are attached to a favourite hypothesis. It seemed clearly to follow from it, that the perpetual and progressive increase, which so strongly marks this cruel disease, is to be ascribed to the perpe-

tual and never ceasing activity of the fluid matter, which we are hourly taking in.

It seemed probable then, that the symptoms which were unaffected by this course should be attributed to one of two other causes, or to both of them united. First of all, other matters equally injurious to the system might also be in action; or, secondly, the disorganization of the whole system might be so great, that its restorative powers might be totally destroyed. And such, I fear, will be found the truth, wherever there is great lesion of the internal parts of the system.

Now one order of symptoms having been so clearly traced to the operation of the liquid *ingesta*, it became the most obvious suspicion, that errors in the nature and qualities of the solid aliment might be the occasion of some of the other very severe and intractable symptoms.

VEGETABLE matter forms the nutriment of the great bulk of the human race; at the same time, all men, whose circumstances permit them to indulge their appetites, use no small

proportion of the flesh of animals, as an article of diet. Man has, in consequence, been deemed to hold a middle rank between carnivorous and herbivorous animals; and physicians have been very ready to suppose that individuals possessed constitutions essentially different; some requiring an increased proportion of vegetable food, or even a total abstinence from flesh; others, a treatment entirely opposite. Nor have such opinions been adopted upon slight foundations. The simple abstinence from flesh has been known sometimes radically to cure, more frequently to palliate some of the worst diseases to which our frame is subject, as epilepsy, gout, rheumatism, hypochondriasis, pulmonary consumption, and, in general, all disorders, which are accompanied with signs of turgescence, or with a dry and feverish habit. But in diseases accompanied with little or no fever, where there are signs of debility and diminished action, a more plentiful diet of animal food has often been attended with effects apparently the most happy. The attempt to adopt a vegetable regimen has often produced so much lowness and debility, amounting even to fainting, and other alarming symptoms, as

to excite an almost unconquerable persuasion, that there are certain constitutions, to which animal food is indispensible, and with which a vegetable regimen is absolutely incompatible.

But notwithstanding these apparent varieties of the human constitution, I am at length perfectly convinced, that those philosophers, (few in number, but powerful in name and in argument) are in the right, who have maintained, that man is in his proper nature strictly to be ranked among the herbivorous animals; and that the use of the flesh of animals is a deviation from the laws of his nature, and is universally a cause of disease and premature death. The almost universal appetite which is shewn for flesh, approaching nearly to the strength of instinct, (the fact which is the strongest argument in its favour,) is formed partly by indulgence; but it is produced, I believe, much more by the natural instincts and propensities of man being destroyed or perverted by his situation and his habits. It is certain that other animals can be nourished by matter which is quite foreign to their nature and original propensities, and by habit they contract a relish and attachment to their new diet.

Carnivorous animals, (the dog, for example) has been fed, and apparently well nourished, upon vegetables: herbivorous animals (as the horse, the cow, the sheep, or the ape) have been fed upon flesh, and even upon fish. But whether animals thus forced out of their natural habits, are as healthy, and live as long as when following the guidance of instinct, has not, I believe, been ascertained, or much thought about. One striking example, however, of its pernicious consequence is continually before our eyes. The hog is naturally herbivorous; he is formed to turn up the earth, and to collect his nourishment from roots and fruits. Under the care of man he has become omnivorous; but at the same time, he is become the most unhealthy of all our domestic animals.

Take the full grown man, changed and transformed as he is, by a variety of causes, and we should infallibly conclude that the desire of animal food is one of his most powerful instincts. But in children it is far otherwise. They are mostly indifferent to animal food; it often affects them with extreme disgust: milk, fruits, and vegetables are their

delight. This of itself is enough to infuse a strong suspicion, that the appetite and relish for animal food is an artificial appetite, produced by the gradual operation of foreign causes.

It is allowed, that by a confinement to vegetable food, the senses of sight, smell, and touch, become more acute; that the intellectual faculties are more clear; the skin more perspirable; the body more active; if such a regimen does not give an exemption from acute diseases and premature death, it upon the whole is favourable to longevity. It is certain also that it conduces to form a milder character, dispositions more benevolent, and morals more pure. If then animal food makes the senses less acute, the intellect less clear; if it produces a dry skin and a lethargic habit; if it renders the animal short-lived, and, whilst he lives, depraves his character; it would seem to require no further proof, that it is a species of aliment not suited to the proper nature of man. Pathological facts are still stronger. If epilepsies, for example, have been cured by abstaining from animal food; if paroxyms of gout have been subdued; in

these examples at least, the use of this aliment was obviously the cause of these most dangerous and painful affections. The question then recurs with increased force,—Is it possible that the direct and immediate cause of such great and obvious mischiefs can be innocent and useful in any case whatever?

If these conclusions, which seem so evident, have not been generally assented to; or, to speak more truly, if they are entirely at variance with common opinion, there must be strong objections, which have prevented men from seeing or attending to their force. Two facts seem principally to have conduced to this end.

First; a vegetable diet has never effected more than to palliate diseases tending to death. This would naturally make men despair of of seeking for radical cures in the effect of regimen; and to search for relief, if it were to be obtained at all, in the properties of drugs. Regimen has only been thought of, as subsidiary to these. In the Cancer, for example, the utility of abstaining from animal food has been remarked. "A diet consisting almost

entirely of milk and vegetables" (says Mr. BENJAMIN BELL,) "I have found to answer best."* But that such a regimen has effected a cure, or that it has had any great influence over the habits of the disease, has never been pretended. Indeed, there being tribes of people, whose diet consists entirely, or almost entirely of vegetables, it could not possibly have escaped observation, if they had enjoyed any exemption from the horrors of this disease.

Secondly, the apparent advantage derived from the use of animal food has made the prepossession in its favour still stronger. It cannot be denied, that even the peasant, who tastes of flesh perhaps only once a week, feels from it a degree of support and strength, which is not afforded by his vegetable meal. Arguing then from his sensations, how is he to be persuaded, that what forms one of his first delights, and is one of the objects of his strongest desire, is really injurious, and accelerates his passage to the grave? The paleness, shrinking of the features, loss of flesh, and weakness, which are often induced by a

* BELL's Surgery, Vol. II. p. 394, 7th edit.

change from a mixed to a pure vegetable diet, has confirmed this prejudice, and has made it with many wholly insuperable.

All these latter appearances, however, are merely temporary, the natural consequences of withdrawing from the system a powerful and habitual stimulus. If there be no disease inducing emaciation, these appearances will at length vanish, and the strength will be as good or better than under the former regimen. Examples of persons, who have been perfectly nourished, and who have possessed every external sign of health and strength under a pure vegetable regimen, have been so numerous, that it is needless to cite any particular instances of so obvious a truth. It may even be observed, that healthy children confined to vegetables, are more fleshy and fat, than those who are habituated to animal food.

The appearance and feeling of increased strength imparted by animal food, seem to me to depend upon principles, not so obvious on a superficial view, but which I conceive to be a direct consequence of acknowledged facts;

and the truth of which has been hitherto confirmed in every trial, which I have instituted. Man being exposed perpetually to various causes of disease, and in consequence experiencing perpetually a quantity of uneasy feeling, has exerted his ingenuity in attempts to render his situation at least more tolerable, when he has found it impossible to shake off the load which oppresses him. He has therefore had recourse to methods of blunting the sensibility of his system, where he has not been able to escape from the cause of his sufferings. On this principle, vinous spirits, tobacco, opium, and other narcotics, have come into universal use; perhaps the effect of tea and coffee is similar in kind, if not in degree. All these substances seem injurious to the frame; but we are contented to purchase ease, though at the expense of shortening the duration of our existence.

The effect of using animal food seems to me very analogous to the operation of narcotic poisons, except that it is in its nature more permanent. In the form of water we are constantly taking in a poison, which affects every fibre of the body. It is the direct and

immediate agent in the production of Cancer, and may therefore be fairly suspected to be operative in the generation of all diseases, attended with a solution of the continuity of parts. Besides this, it is perpetually exciting increased secretions, which produce a perpetual sense of debility and exhaustion; and it may be readily supposed, that it must be the cause of much uneasy feeling, of which the seat will be various, as various organs are principally affected.

It is, I think, equally evident, that one of the most distinguishing properties of animal food is to produce a torpor, and to blunt the sensibility of the nervous system. What proof of this can be stronger, than what may commonly be observed to be the effect of a full meal? The face becomes swollen and red, there is inaptitude to motion, and compleat sleep often succeeds. The effects of a large dose of opium are hardly more decisive. These same symptoms in a more exquisite form are compleat apoplexy; a disease, which takes place occasionally without any effusion of blood or other fluids upon the brain: and most chronic disorders, in the latter stages of

life, are strongly marked by a torpor pervading the whole system. The increased perfection of the senses under a vegetable regimen equally shows, that the direct effect of this regimen is to restore the sensibility of the nervous system, and, in consequence, all the functions which are dependent on it.

From this statement (which is not drawn from any preconceived opinions, but from a careful attention to the phenomena of the living body) it follows, that under a vegetable regimen the system becomes more and more alive to foreign impressions. The most powerful of all these is the deleterious matter conveyed into the system by water. The sense of weakness then, and other inconveniences experienced by those, who have adopted a vegetable regimen, is far from being a necessary consequence of the regimen itself. Instead of its being a proof of the mischievous effects of this regimen, it is a proof of the very reverse; it is a proof of the sensibility being restored in parts previously torpid. If this account be correct, to get rid of this uneasy feeling, common sense dictates, not that we should again stupify the nerves, by resuming

the use of animal food, but that the origin of the evil should be cut off. If the contrary method be taken, it may be attended with a transient appearance of success; the strength may appear to improve; the countenance may become more full and coloured; the languor and uneasiness may disappear: but all these signs are delusive; no real strength is obtained; but, on the contrary, the system, by overstimulation, perishes with greater certainty and rapidity.

I speak not from theory, (as preconceived opinions are commonly denominated) but from reiterated observation. I have now, in a variety of examples, injoined an union of a strict vegetable regimen to the use of distilled water; nor have I perceived in a single instance any weakness or other ill effect produced by this change of diet.* Nay, more; I have distinctly seen one example, in which there was a great sense of weakness produced by leaving off meat alone; but when the vege-

* I speak of what I have *seen*. I have indeed *heard* of two cases, in which it was relinquished from weakness either felt or apprehended. Of these I will not pretend to judge.

table diet was united with the course of pure water, there was no sense of weakness at all; but, on the contrary, increased strength. I have indeed observed some paleness, shrinking of the features, and loss of flesh; appearances which are apt to excite great alarm: but they are merely temporary, and after a few months disappear: nor are they, by any means, universal.

I am well acquainted with a family of young children, who have scarcely ever touched animal food; and who have now for three years drunk only distilled water. For clearness and beauty of complexion, muscular strength, fulness of habit free from grossness, hardiness, healthiness, and ripeness of intellect, these children are unparalleled.

If the whole argument in favour of the use of the flesh of animals be dispassionately considered, it will be found to amount to this, and to nothing more: it introduces into the system a quantity of pleasurable sensation, which is accompanied with some temporary increased strength. It is by no means proved, that in healthy systems it gives any

real, and permanent increase of strength, as measured either by the power of superior exertion, or by the capacity of continuing moderate exertion. What is said then on behalf of meat, may be said with equal force on behalf of wine: wine too introduces pleasurable sensation, and seems to strengthen. But whether this gratification be useful or noxious, (the only reasonable criterion of what is natural or unnatural) cannot be determined by the primary and immediate effect. This can be done only by a comparative view of the length of life under opposite systems; by ascertaining correctly what is the ultimate effect, as well as the immediate; and, above all, by establishing experimentally, whether diseases tending to death can be cured by renouncing the use of flesh, whilst their fatality continues without the adoption of this measure. It is hardly possible, I think, to devise any other species of proof, which shall be exempt from cavil.

What I have said with regard to animal food, applies with greater force to fish, which there are strong reasons for suspecting to be still more noxious to the human body.

As it is rarely in this country made a principal part of diet, it is difficult to obtain accurate ideas of its effect. Hear, however, the account of HALLER:—"But the frequent use of "fish produces a noxious kind of acrimony, "from which are produced itchings, an altered "epidermis, the *morbus pedicularis*, leprosy, "scurvy, malignant ulcers, and fevers.*" Medical writers have dealt so much in gratuitous assertions, that I will not venture to say, that all these mischiefs have been justly traced to their proper source. It is certain, however, that the stomach is apt to reject fish, and it requires the aid of vinous spirits to prevent it from sickening; that when it has been much used, persons quickly become tired, and even disgusted with it; and in sea port towns, where children feed much upon it, that great numbers are apt to fall victims to measles, scarlatina, or other epidemics. For these reasons, I suspect that those, who think the use of fish not inconsistent with a vegetable regimen, labour under a great error. The ground of this opinion seems to be, that it does not stimulate the arterial system, like flesh. But

* HALLER, Physiolog. tom. vi. p. 205.

in questions of diet, the mere temporary effect is a matter of little moment: the ultimate effect is what is principally to be regarded; and on this point, unfortunately, we hitherto hardly possess data, from which to draw correct conclusions.

If I cannot regard even milk without some suspicion, it is chiefly, I must confess, from the theoretical reason, that I regard man to be an animal strictly herbivorous; and therefore cannot but doubt that all substitutions for the species of food, which is immediately suited to his organs, are eventually hurtful. Still, however, we have direct and satisfactory evidence, that the substitution of milk for animal food has been followed by very beneficial consequences, and has even performed very surprising cures. The utility of this substitution in the gouty affections of young and athletic habits is well known.* Dr. Taylor, a physician, of Croydon, got rid of epileptic fits, by a total diet of milk, without bread, or any other vegetable. † "Here is Dr. Taylor,"

* Forest. l. iv. c. 10.

† Cheyne's English Malady. p. 253.

(a clergyman of Derbyshire) says the celebrated Dr. JOHNSON, * "by a resolute adherence to "bread and milk, with a better appearance "of health, than he has had for a long time "past." We may conclude then, that milk is at least not a direct agent in the production of the violent symptoms of some chronic diseases; and that its use is admissible, though I do not wish it to be greatly indulged in.

I might now proceed to illustrate the justness of these principles, by relating the effects of this regimen on the most terrible of external diseases, the Cancer; a disease, on which neither regimen nor medicine has hitherto had any beneficial influence. But as the general prejudice of mankind in favour of animal food is one of the strongest, perhaps, which infect the human mind; and as it is fostered and strengthened by the opinions, almost concurrent and unanimous, of physicians, physiologists, and philosophers; it may not be amiss to consider the argument as drawn from the structure of the human body. Anatomy, it is said, demonstrates that man

* Letters to Mrs. Thrale, ii. 204.

was intended by his maker to use a mixed diet. Great authorities are quoted in behalf of this position. "The structure of man"—says the illustrious HALLER (in whose defence it may be said, that he lived at a time, when the study of comparative anatomy was in its infancy) "the structure of man is placed be-"tween that of carnivorous and herbivorous "animals, and partakes of both, approaching "nearer, however, to that of the herbivo-"rous.*" In like manner, Mr. HOME (for whom the same apology cannot be made) has said,† that the human stomach is the link between those of animals, which are fitted to digest vegetable substances, and those that are entirely carnivorous: but he acknowledges, not very consistently, it would seem, that its internal structure exactly resembles that of the monkey and squirrel, two animals which live entirely on vegetable matter.

Facts however seem in direct opposition to this hypothesis. More than a century ago,

* Physiolog. tom. vi. p. 189.

† HOME's Observations on the Structure of the Stomachs of different Animals, in the Philosoph. Transactions for 1807.

Tyson and Cowper had observed, the exact resemblance both external and internal between man and the species of ape, called orang-outang.* This resemblance is so close, that Buffon, after noticing some points of difference, observes, "all the other parts of "the body, the head and limbs, are so per- "fectly similar to that of man, that we cannot "compare them without admiration, nor with- "out being astonished, that from a confor- "mation so similar, and an organization "which is absolutely the same, there should "not result the same effects. Man and the "orang-outang are the only animals, in "which the brain, the heart, the lungs, the "liver, the spleen, the pancreas, the stomach, "the bowels, are absolutely alike: the only "ones which have a vermicular appendix to "the cæcum; in fine, the orang-outang bears "a closer resemblance to man, than to any "other animal, even than to baboons and "monkeys." †

Hear the sentiments of the experienced M. Daubenton, the associate of Buffon, and

* The Anatomy of a Pigmey, London, 1699.

† Buffon, Histoire Naturale, tom. xiv. p. 43.

the first writer, who rendered the study of anatomy subservient to natural history.

"The example of carnivorous animals is "not conclusive to determine the nature of "the aliments most proper for man, because, "from the conformation of these animals "they have fewer relations than those ani- "mals who live on vegetables. I have clearly "ascertained this fact by comparative anato- "my, in the dissection of a great number of "animals of different species."

"Apes are the animals who differ the least "from us in the general conformation of their "bodies, particularly in that of the mouth, of "the teeth, of the tongue, of the throat, of "the œsophagus, of the stomach, and of the "intestinal canal. This analogy, which I "have carefully traced between man and the "ape species, doubtless takes place in the "functions of digestion, as well as in the "structure of the alimentary canal; conse- "quently there is every reason to infer a si- "milar analogy in the nature of their respec- "tive food. But the wild apes, who range "at liberty in their native woods, live solely

" on vegetable productions;* it is then highly " probable that man, in a state of pure nature, " living in a confined society, and in a genial " climate, where the earth required but little " culture to produce its fruits, did subsist " upon these without seeking to prey on ani- " mals." †

To examine the question a little more closely.—" These two classes," (the carnivo- " rous and herbivorous) says HALLER, " are " said to differ in the stomach, teeth, intes- " tines, and principally in the form of the " *intestinum cæcum.*" ‡ To shorten the discussion, I will confine it within these limits; though they are much too narrow. A complete view of the subject ought to survey

* This animal, like many others, may by domestication be made to live on a variety of substances, animal as well as vegetable; in this condition he may be called omnivorous, precisely on the same grounds as man is esteemed to be so. But in this condition too he is very unhealthy, which he probably never is in his native climate, and using no food, but what is suited to the nature of his organs.

† DAUBENTON'S Observations on Indigestion. Translated by Dr. A. P. BUCHAN.

‡ Physiol. ib.

man in the whole of his frame, in his more important relations, in the structure of his mind, and the genuine unsophisticated emotions of his heart.

The stomach. A great variety of animals, both carnivorous and herbivorous, have the stomach formed of a single membranous bag, like the human stomach; having the tunics, of which it is composed, the orifices, and the general form, very nearly alike. The horse, which feeds on grass, has a stomach like the human. But in the ape species, the difference is the least; and, among the animals of this family, that of the orangs bear the greatest resemblance to it.* In no just sense then can the human stomach be said to be a link between that of herbivorous and carnivorous animals. If some of the latter class have likewise a stomach much resembling the human, the just inference is, that from the form of the stomach simply, no conclusion can be drawn with regard to the nature of the aliment best suited to the animal, to which it belongs.

* Cuvier, Leçons d'Anatomie Comparée, tom. iii. p. 373.

The teeth. In man, the teeth of each jaw are the same in number and kind; on each side there are two incisors, one canine, and five grinding teeth; in the whole, thirty-two. Here again, the ape tribe perfectly resembles man, both in order and number; nor is there any other species of animals, in which this analogy exists.

The incisors in man have a flat cutting edge like the horse or cow; whereas those of carnivorous animals have piercing conical points. In the form of the canine teeth he agrees with the orang very nearly;* but in the other kinds of ape, these teeth are much longer, and there is a vacancy between the incisors and the canine teeth, which receives the extremities of the canine of the opposite jaw, when the mouth is closed. This shows that these animals are formed to collect their food directly by the mouth, their paws being employed in clinging to the trees on which it grows; whereas man is intended to convey it into his mouth by the hand. In many animals, which feed entirely upon vegetables,

* Cuvier, tom. iii. p. 169.

the canine teeth are more pointed and conical than in man.

The grinding teeth of man are furnished simply with rounded tubercles, the two anterior having two, the three posterior having four such tubercles. In the ape species, the form is very nearly similar. But in carnivorous animals the posterior teeth are of two kinds. Those in front have several cutting points; those which have tubercles fit for grinding are placed behind.

In the structure of the teeth then man is entirely like herbivorous animals.

The Intestines. HALLER admits that the intestines, in general, of man are formed like those of herbivorous animals. "The intestines, in general," he says, "both in man and "in herbivorous animals are of an extraordinary length, and the large intestines are of a "great magnitude." * In man, the proportion between the length of the body and of the intestines is as one to six or seven. In the ape species, the proportion varies from one to five,

* HALLER, Physiolog. ib.

to one to eight. In the cat it is as one to five; in the lion only as one to three. *

The intestines of carnivorous animals are distinguished from those of herbivorous by their inferior magnitude, and presenting a smaller surface for absorption. In the herbivorous, the surface is increased by folds of the internal membrane; in the carnivorous it is nearly smooth through the greater part of its length. Whilst, in many of the former class, the colon is thrown into a cellular form by longitudinal bands, and its internal surface is increased by the folds, which form the sides of the cells, in the latter are found only some irregular puckerings towards the termination of the colon, and in the rectum, or sometimes a few longitudinal folds. In all these respects the intestines of man entirely recede from the structure of the carnivorous, and is identical with that of the herbivorous animals. Through the whole tract of the small intestines there are duplicatures of the internal or villous coat, called by anatomists *val-*

* See a Table of this proportion in all orders of animals, in CUVIER's Leçons d'Anatomie Comparée, t. iii. p. 448.

vulæ conniventes: and his ample colon has the same internal valvular structure, besides having its capacity enlarged by the cells formed by the ligamentous bands on its surface.

The cæcum, doubtless, of some herbivorous animals is of an extraordinary capacity. Such is its structure in the horse and the elephant, in hares, rabbits, and squirrels. It is likewise certain, that in carnivorous animals this portion of the intestines is usually short and narrow. But the extraordinary magnitude of the cæcum is not constant in the former class. In ruminating animals it is of a moderate size: it is so likewise in the hog. In man the analogy with the ape tribe is still preserved; indeed, the whole canal is formed so nearly alike in each, as to present hardly any differences worthy of notice. The cæcum, though short, is larger than in the carnivorous. Its structure, which is that of a portion of intestine similar to the colon, and furnished with a vermicular appendix, is nearly peculiar to the human form. But even in this point the orang species of ape retains its accustomed similarity.* The other species are without it.†

* Ib. p. 480. † Ib. p. 465.

Anatomy, therefore, does not furnish the smallest ground for the assertion, that the structure of the organs of man, of those particularly which are subservient to nutrition, partakes of the nature both of those which belong to herbivorous and to carnivorous animals. No reason, then, can be drawn from anatomy for supposing him to be the connecting link between these two classes. His structure is strictly that of an herbivorous animal, in every essential particular. There only remains, therefore, in behalf of the doctrine of man being naturally omnivorous, the argument drawn from the nature of his appetite. "Since the question has been so often agitat-
" ed," says HALLER, "whether man be herbi-
" vorous, or equally carnivorous, it may be de-
" cided from the very nature of the appetite."* If man were strictly under the government of instinct, this argument would have great weight, since pure instinct probably never errs. If man, too, were a healthy animal, it would go far to prove that his appetites are not misdirected. But since he is the most diseased of all animals; and since, abandoning the impulses of instinct, he has committed his safety to the

* HALLER, Physiolog. tom. vi. p. 185.

guidance of a feeble and erring reason, such an argument loses all its force; and it at once becomes highly probable that his appetite is perverted, and that the indiscriminate indulgence of it is one of the great causes, which conduce to his premature destruction.

We can hardly doubt that man, in his primæval state, was, like other animals, furnished with instinctive appetencies and aversions, inciting him to seek the objects conducive to his well-being, and to avoid those which are noxious. But in social man we meet with few traces of any such principle. Individuals, indeed, have peculiar objects of desire or aversion; but they are so rare, and seem so little directed to the conservation and well-being of the individual, that they are regarded as deviations from the common laws of the species. Instinct in social man is wholly extinguished. Two principal causes seem to have effected this great revolution in his system.

The first is his migration from warm and tropical climates to colder regions, which are less suited to his frame. In consequence of

this, his sensibility is much diminished, and his sensations do not inform him so correctly what is useful or what is injurious. Accordingly, we find that in southern latitudes men experience much more obvious and immediate injury from excess in animal food; and the inhabitants of these climates subsist very much more on vegetable productions. In these climates disease makes far greater havoc, it is both more rapid and more destructive to those, who live upon flesh. The French, who use much bread and little meat, escape the fevers of the West Indies much better than the English, whose habits are the reverse. The appetite for animal food is also greatly diminished in warm climates. We experience the same thing in our own country in the summer months, during which, meat to many excites disgust.

But a second cause, which is common to all climates, and which will be found to be still more powerful, is the use of watery liquids, as a substitute for the fruits and vegetable juices, with which man would, I believe, in a state of primæval simplicity, at once satisfy the appetite of hunger, and prevent

thirst. The poison thus introduced into his body directly deranges the sensorium, alters his feelings, and gives a new and unnatural direction to all his propensities. It produces a great change on the powers of digestion; and with this it effects a corresponding change in the desires and aversions. Vegetable matter, which, to the stomach of a healthy child, is the most delightful, the most nutritive and strengthening aliment, gradually seems to lose its power; it ceases to impart either strength or pleasure. In a state of manhood, to many it is an object of disgust, to almost all of indifference. It excites flatulence, and often gives pain and uneasiness; and the power of digesting it becomes more and more destroyed. To render it tolerable, it must be heated and macerated: by these means it is made more soluble, and digestible with greater speed. But by these same means its sweet and nutritious juices are either decomposed or extracted; and weighty reasons may, I think, be given, to shew that, in this condition, it neither imparts the strength, nor the nourishment, that it would do, when used, as it is by the animals, without any preparation. How astonishing is this revolution! How incon-

ceivable, that the only species of food, which, previous to the invention of arts, it was in the power of a human being to obtain;—that the only species of food, on which the primæval race subsisted, during the silent lapse of ages;—that the species of food, which we know affords a healthy nourishment at this present day to many races of men,—how inconceivable is it, that in all civilized and crowded communities it is not merely disregarded, but seems to become truly indigestible, and on many to assume the force and activity of a true poison!

Now, that this is truly the effect and consequence of using water in its ordinary condition, is not an imaginary hypothesis, but a serious truth, the result of careful and repeated experience. It will be found experimentally true, that by using distilled water, the power of digesting vegetable matter will be restored and improved; that the stomach will gradually be enabled to digest it, even raw, and without any condinent or other preparation; that with the power of digestion, the inclination to vegetable food will be renewed; that it will be easy under such a

system entirely to subdue the desire and craving for animal food; that, finally, what was at first looked upon with antipathy and disgust, will, by habit, be rendered most easy and most delightful.

If the sketch, I have drawn, of the great revolution of habits, which the human species has undergone be just, it gives at once a complete solution of the corresponding change, which has been introduced into the moral and physical constitution of man. If he can be restored to his primæval integrity, he must carefully retrace his steps, and regain the path, from which he has so widely deviated. In enjoining him then to confine himself to vegetable food; to use it, as much as his feelings of comfort will permit, in the form presented him by the parental hand of nature; and to avoid the use of all fluid matter contaminated and loaded with putrefaction; I am but bringing him back, as nearly as is possible in a complicated state of society, to the condition which he has quitted; or, to speak more truly, I am leaving him in the possession of all that is valuable in social and polished life, and presenting to him the consol-

ing prospect of being rescued from the load of innumerable evils, which it has entailed upon him.

But it cannot be expected, that any thing but facts, the most precise and authentic, can make men apprehend the possibility of effecting so great a change in the human constitution. So much are we the slaves of habit, that every thing new is ridiculous. But, in truth, the theory I have chalked out, is founded upon facts, all of them of unquestionable authenticity, and most of them of perfect notoriety. No facts can be more authentic than the utility of the pure natural springs, such as those of Malvern, in a variety of obstinate and intractable disorders. Scrophulous tumours, and ulcerations, and other defedations of the skin, have afforded the most obvious proofs of their powers; and if these facts are not universally known, it is obviously owing to two causes. 1st. Such springs being rare, their use is necessarily very limited, and their reputation local: 2d. All regimen by water alone is essentially defective; and, in consequence, the benefit will be partial and imperfect; and there will be many examples of fai-

lure. Still, the real power being unquestionable, to attempt to imitate these waters, or rather to improve upon them, and to determine experimentally whether their utility is the effect simply of their purity, must be deemed the first step towards the establishment of a regular system of dietetics. No facts again can be more authentic or more notorious, than the utility of a vegetable regimen in other diseases, some of them of the most severe, painful, and dangerous of any, that the human frame can undergo. But on ulcerations, in particular, this regimen has had little or no beneficial influence: in so much that, in scrophulous complaints, it has been deemed (upon no just foundation, I am persuaded,) to be directly injurious.

It seems therefore the most simple deduction of reason and common sense, to expect, from the combination of these two systems, effects, which are not to be hoped for from either of them singly, and which it is in vain to look for in the operations of drugs.

But to come to facts still more precise. A diseased human body may be deemed a

sort of thermometer, by which, to calculate the effects of agents, the operation of which upon sound systems is not to be readily appreciated. Volumes have been written on diet; and after the labours of three thousand years, we seem not to have made any steady advancement in an art, which is of the most immediate consequence to every human being. Contradictory opinions still divide the minds of the most enlightened; and the bulk of mankind are merely the slaves of blind custom, and of prejudices still more obstinate. Such must ever be the case, in the absence of fixed principles, and in the utter ignorance in which we live of the real agency of the substances, which we are employing during every moment of our existence. To arrive then, at length, at something like certainty; to bring the principles I have attempted to establish to the sure touchstone of truth or falshood; I have selected diseases, acknowledged to be incurable by the art of medicine. All however of this description are not equally proper to influence and inform the public mind. In internal diseases, the symptoms are often obscure and irregular; very slow and gradual changes are not easily characterized;

nor is it always demonstrable, whether they are the consequences of treatment, or of the unassisted powers of the constitution.

I have sought then for an external disease. I have sought for one sufficiently well marked to admit of a definite characteristic name, and to become an object of evidence; it ought not to be very rapid in its progress; it should be such as to admit of no cure from medicine, nor from the powers of the constitution, whilst living as persons usually live; and it should end in certain death. In a word—I have sought for the CANCER.

It is now, therefore, my business to report the effects of this regimen on CANCEROUS TUMOURS and ULCERS: and, according to the custom I have hitherto observed, I shall relate the circumstances of all the patients, who have tried it for any length of time, with the events, favourable or otherwise, of the cases.

In the choice of the subjects, whom I have hitherto treated, I have not been very for-

tunate: having no power of selection, I have taken such as I could procure. Under every disadvantage, however, I have collected such a body of evidence as will, I hope, render the following conclusions indisputable. The spreading of the cancerous disease into the contiguous parts is compleatly prevented by the use of pure distilled water; cancerous tumours can by the same practice be removed by absorption; cancerous ulceration can be prevented; cancerous ulceration can be compleatly closed up by the basis of the ulcer becoming covered by the surrounding sound skin; in one case, which proved fatal, a part of the ulcer has been brought to cicatrize, but the cicatrization was not permanent; in another, of which the event was similar, all the parts surrounding the principal ulcer were made perfectly sound, and some ulceration firmly cicatrized; that by uniting the use of distilled water to a vegetable diet, life may probably be prolonged to an indefinite extent, even in certain cases of ulcerated Cancer of long standing; and it must follow as a direct consequence of these facts, that if the disease be incipient, and the patient in good

health, the Cancer may be prevented from ever becoming a serious disease at all.

In one sense I am inclined to believe that the Cancer will ever prove incurable. If it affects the mammary gland, the diseased part will ultimately perish, either by its being removed by ulceration, or by absorption. The facts are too few, to assert that this will be constant; but the powers of regeneration possessed by the human system are so feeble, that the supposition is highly probable. Should it prove to be so, this circumstance will be a proper criterion, by which to determine, whether a case treated in an early stage by the method here proposed, has or has not been a genuine case of Cancer.

Of the following Cases, the first has appeared already in my "Inquiry into the Ori-" gin, Symptoms, and Cure of Constitutional " Diseases." The account of the early stage here given is more complete, and the narration is brought down to the termination of the disease. Of the others, I shall only say, in general, that the accounts are drawn mostly

from notes taken down during my attendance on the cases: some few circumstances have been supplied from memory; and for the whole, I pledge my own character for their being uncontaminated by any exaggeration, or other wilful misrepresentation whatever.

CASE I.

MRS. J——s, was the wife of a respectable man, who lives in the country, at a considerable distance from the metropolis. She had been married several years, but had no family, and, I believe, was never pregnant. In the summer or autumn of 1803, being about forty-four years of age, she perceived a hardness of her right breast. It became painful; her health declined; she became emaciated, and lost her strength very rapidly. In the month of October of that year she had recourse to the advice of a gentleman of extensive practice, Dr. Thomas, of Kington, Herefordshire, under whose care she remained about seven months. During this time the health continued to decline, the breast became schirrous, and the axillary glands of the affected side became swelled and indurated; sometimes she was affected also with rigors and giddiness of

the head. A number of little tumours, of the size nearly of peas, formed in the skin contiguous to the schirrous breast, irregularly dispersed. In the early part of the year following, (1804) one of these little tumours ulcerated, and the ulceration slowly and gradually extended itself in every direction.

These symptoms put the nature of the disease of the breast beyond a question. The induration of the gland had every characteristic of the true Cancer; and the tumours of the skin are esteemed by the most experienced surgeons to be of the same nature.*

In May 1804, her disease continuing to make progress, she put herself under the care of Dr. Blount, physician at Hereford; who, conceiving it a proper opportunity for trying the effect of distilled water, recommended its

* "But the remarkable circumstance was, that in the "neighbourhood of the tumour, to which the skin firmly "adhered, and had the tucked in appearance, which is "considered as one of the true characteristic marks of "Cancer, there were several *cancerous* tumours in the "substance of the skin, about the size of small split peas." —Home on Cancer, p. 66.

adoption to her. His advice was complied with; a proper apparatus for preparing it was procured; and, with the trifling exception of taking a very little ale or made wine, now and then, she rigidly adhered to its use for about ten months. The course was entered upon in the latter end of the month of June, 1804.

Soon after the adoption of this regimen, a small ulcer, similar to the former, appeared upon a second of the small cancerous tumours of the skin; the first had by this time become of the size of a half crown piece. But after the course had been continued a month, it was observed, that both the one and the other had become perfectly stationary.

In the beginning of October, 1804, I myself saw her. At this time the schirrosity occupied the whole of the glandular substance of the breast, which was of a stony hardness, with an irregular tuberculated surface; but it was not of more than the natural size, nor had it formed any adhesions to the side. The skin over the schirrous tumour was entire, and of its natural colour: it was adherent to the tu-

mour beneath. The surrounding little tumours had a thickened and elevated margin, and at their central parts the cutis was detached from the base; consequently, at this part they formed a small and, apparently, an empty vesicle. That, which had now been ulcerated some months, was still of the same size; its base was clean, but its edges thick and callous; a serous fluid exuded from it, but not very copiously: it gave little or no uneasiness. The smaller ulcer was still no larger than a pea. The axillary glands were swollen and hard. She sometimes suffered very severe and oppressive pain in the diseased breast, which would last a great many hours successively. She had been so afflicted for two days previous to my visit; but at that time the paroxysm had subsided.

The constitutional symptoms were still more unfavourable, than the local. Her strength was so much reduced, that she was confined to her room. Her habit was naturally spare, and she was now much emaciated. The gums were loose and spongy, and she had lost several of her teeth. The complexion was pallid; and the pulse quick and

feeble. She had suffered much from pains of the limbs, resembling rheumatism, in consequence of which, the lower limbs, in particular, were much enfeebled; nor had she a due degree of strength in the hands and arms. The most favourable sign about her was, that the appetite was but little impaired.

The effect of the course upon the local disease continued to be very satisfactory. At the end of seven months the larger ulcer had merely become a little wider by the perishing of a small part of the inner margin of its thickened edge, and the discharge diminished; neither the large nor the small ulcer had spread at all into the surrounding sound parts. The pain in the breast likewise gradually declined. The relief procured in this respect was equally evident to her attendants, to her husband, and to herself.

But notwithstanding these flattering appearances of the local disease, the health continued to decline, and the strength to decay more and more. About the month of November 1804, the general pains, attended with sickness and vomiting, were so severe as to

excite convulsive motions of different parts of the body; these attacks of sickness and pain recurred every sixth or seventh day; and at this time she was so generally disordered, and her strength was so much impaired, that her friends and her medical attendants expected her speedy dissolution. But from that time the symptoms put on a more favourable aspect. The health and strength seemed to improve; the appetite increased, and she slept better; paroxysms of sickness and pain, with convulsive motions, still recurred; but the intervals between them became longer, and they were, upon the whole, slighter. The amendment was so great, that all apprehensions for her immediate safety were removed.

In April 1805, her strength was so much improved, that she undertook a journey to London; partly with a view to put herself under the care of the late Dr. Rowley, whom she had occasionally consulted by letter. A paroxysm of sickness and pain attacked her on the road, by reason of which she was eleven days in performing the journey. She remained too about a month under Dr. Rowley's care; and, during this time, she discon-

tinued her regimen: so that, upon the whole, the course suffered an interruption of about six weeks. For three or four weeks this interruption caused no perceptible change; but afterwards its effects became sufficiently evident. It caused a general sense of uneasiness, and irritation; the strength sunk; and she became subject to constant perspirations. Under these circumstances she was easily persuaded to resume the use of her distilled water; and she put herself under my own care during her continuance in London.

May 29, 1805.—I found the local disease much improved. All pain in the schirrous tumour and in the axillary glands had ceased. The thickened edge of the ulcer, which had begun to yield ten or twelve weeks before, was entirely removed, so that the sore presented a flat, superficial, granulating surface; but the granulations were pale and feeble. I could not perceive that the ulcer had at all spread from the time that I had before seen it. The condition of the little ulcer was precisely similar, being still no larger than a pea. No more of the little cancerous tumours of the skin had ulcerated; but several more of

them had appeared, of which, however, the summits had no appearance of vesication. There had been, I was told, a considerable tumefaction of the skin, somewhere between the breast and the shoulder; but this was entirely removed.

But though the health had improved considerably, it was far from having acquired stability. The legs were slightly œdematous; there was a general paleness; the bowels were deranged; and the debility was considerable. The arms, in particular, were so weak, that she could not put them behind her head, to adjust her dress. The liver was much tumified; and there were some grounds to suspect that water was beginning to be effused into the cavity of the abdomen.

During this time the local disease still remained stationary. The ulcer discharged a matter, which was now and then pretty thick; but was more commonly whitish and serous. A thin skin frequently formed over the sore, but it as frequently came away again. The schirrous tumour continued perfectly indolent, and seemed rather to shrink and become

smaller. The same was true of the glands in the axilla, which, without resolving, gave no uneasiness. A few more little tumours in the skin, some even on the trunk of the body, at a great distance from the diseased gland, were formed: the little ulcer followed exactly the course of the larger one.

Her great sufferings were from the pains of the limbs: these principally affected the lower extremities, occupying sometimes the ball of the toe, the foot, leg, and thigh; sometimes they ascended to the sides; and their severity was such as to extort bitter cries. They impeded the motion of the affected part, like the rheumatism; and left a sense of soreness behind them. But it was curious to observe, that after each paroxysm, the limbs seemed rather strengthened than weakened; after one of the worst that she suffered, she recovered the use of her arms so much, as to raise them with ease behind her head. In one attack only I perceived the convulsive motions, which affected the neck, the trunk, and the limbs; but the senses were perfectly clear and unimpaired.

In August, 1805, it became evident that water was collected in the abdomen. The urine became scanty, and for a time the swelling continued to increase. But afterwards the urine began to flow more plentifully, the water to be absorbed, and on the 11th of September, the ascites was entirely removed. She took opium, squills, and mercury at this period, and their effect seemed beneficial.

In the beginning of the same month her attack of sickness was attended with *aphthæ* of the tongue, mouth, and fauces; and there was reason to believe, from the symptoms, that the œsophagus, and the internal coat of the stomach and intestines were similarly affected. About the same time she began to cough, and to expectorate a large quantity of viscid phlegm. By all these complaints she was reduced very low; but they all gradually declined, and at length entirely disappeared.

When in a state of convalescence from these symptoms, she left London, (October 5th, 1805;) and performed her journey easily in three days. Notwithstanding the great

variety and complication of her sufferings, she progressively gained strength; and during the intervals of ease, was much more comfortable, and apparently in better health. During the months of November and December, she regained her colour, dined down stairs, went into her garden,* and enjoyed the society of her friends; and for six or eight weeks the striking improvement of her health surprized all who knew her. The ulcer also became sounder. But some uneasiness and tumefaction about the abdomen gave grounds for apprehending, that this was but a fallacious respite.

About Christmas, she had another attack, from the effect of which she never recovered. As far as I can learn, she did not suffer much pain; but the appetite was entirely lost; and whatever was received into the stomach was rejected by vomiting. Water accumulated in the abdomen; but the belly was not tense; the urine was secreted freely; and she had profuse perspirations. Under these symp-

* It will be recollected that at this time, the year before, she had for several months been entirely confined to her chamber.

toms, joined to extreme weakness, she languished for some weeks, and died about the 10th of February, 1806.

But during the last four months of her life, the local disease was still progressively improving; the schirrous tumour was so much absorbed, that in the last month "it was nearly "gone, and the ulcer was in a manner heal-"ed," (I use the words of the gentleman who saw her at this period,) * the sound breast also was wholly removed by spontaneous absorption.

Such are the circumstances, and final issue of the first case, in which the regimen, which I had proposed to be adopted in Cancer, was fairly put to trial. It was continued so long, that its ultimate failure to effect a cure could not with propriety be attributed to the advanced stage, or intractable form of the disease; causes, to which I should have been inclined to ascribe it, had the patient died a twelvemonth earlier; as it was confidently expected would happen. But, under the cir-

* I have since learnt from conversation that it was perfectly dry and scabbed.

cumstances of her protracted existence, the true inference seemed to be, that the method was in some points radically defective. However, as, during the space of more than eighteen months, the schirrous tumour neither increased in bulk; nor formed adhesions to the side; nor spread into the surrounding parts; nor affected the skin; nor shewed the smallest disposition to ulcerate; (all, or some of which events form the common progress of the disease;) as the ulcer of the surrounding skin, which had been gradually and uniformly spreading for five months, for the remaining eighteen remained in magnitude perfectly stationary; lost its carcinomatous character; and assumed the appearance of a healing sore; as the little ulcer followed a course precisely similar; as no more ulceration formed in the other tumours; but, on the contrary, the skin, where disease had begun, became entirely sound; it seems to follow irresistibly, that these, the proper symptoms of Cancer, are occasioned by the use of common water, and are suspended and cured by the use of distilled water; and that therefore, *Common Water is the vehicle, in which the poison of Cancer is introduced into the system.*

By a parity of reasoning, we ought to conclude, that the symptoms, which did not yield to this change of regimen; but which continued to recur with equal violence, though at irregular intervals, were wholly unconnected with the use of water; such are the sickness and vomiting, which have been always observed to form a striking feature in the constitutional symptoms of Cancer; the pains of the limbs; and the dropsical swellings. If these, or any of these, are dependent upon the nature of the matters received into the stomach, it must be to the solid food that we must attempt to trace their source. I have already stated my opinion, that they are caused by the use of animal food; and, in conformity to this opinion, I have advised (since the event of the case just related) a strict vegetable diet to be joined to the use of water purified by distillation.

The difficulty of the investigation has, however, been greatly increased from the severe restraint upon appetite, and the encroachment upon established habits, imposed by this injuction. Accordingly, I have met with many obstructions in the attempt to en-

force it. More difficulty still have I found in making patients comprehend, that they must continue their regimen through life; which, however, is essential to reap the full benefit of it. This circumstance renders a part of the evidence, I have to offer, less complete than I wish. Still, I hope, that the further proofs which I am about to produce, will be perfectly satisfactory, as far as they go. I am not, I presume, accountable for the misconceptions and prejudices of ignorant people. But all have not been such. One, in particular, evinced, during the long trial of near three years and a half, an invincible patience, and a ready and cheerful compliance with every thing, that was advised her. Though she is no more, she had her reward; and the circumstances of the case put it beyond all question, that to water, and to water alone are we to ascribe the spreading of Cancer into contiguous parts. In another, undertaken under happier auspices, the effect has been as decisive, but the benefit infinitely greater; and all, whether attended with success, or otherwise, concur in establishing it as a fundamental truth, that COMMON WATER is the vehicle of the POISON of CANCER.

CASE II.

ANN Thomas, aged sixty-four, a poor widow woman, in the workhouse of the parish of St. Andrew's, Holborn, situated in Little Gray's Inn Lane, had had a Cancer of the left breast a twelvemonth. For three years she had suffered pains of the limbs like rheumatism; and the right leg and thigh were so much contracted, as to make her a cripple. Indeed, she was so lame as to be unable to move or stir from her chair. When the breast became diseased, she first perceived a pricking pain in the nipple; a sensation, which she compared to the flow of milk into the breast upon suckling. She afterwards observed a lump, which enlarged; the skin over it became adherent to the lump, discoloured, and blistered on the surface. After the disease had continued six or seven months, blisters formed on the skin; and some of these running together formed a scab.

July 13, 1805. At this time the scab is lower than the surrounding skin, and so much detached from it, that a probe might readily be passed between them. From this part it bleeds occasionally. Its situation is a little above the nipple. Still higher, and more towards the sternum, there is a lump, irregular and knobby on the surface, with an edge that is irregular likewise. The skin is discoloured over it, and of a dusky red. There is no tumour in the axilla, but there is pain in the arm, about the insertion of the deltoid muscle. The other breast is pretty full, and to appearance sound.

Of the general health, there was no particular complaint, but a general debility; she complained of a sense of tightness across the stomach; the countenance was pallid, and the lips dark coloured, approaching to purple. Considering therefore her time of life, and general decrepitude, there was little hope of rendering her any essential service. The case could not be properly called open Cancer; but there being a considerable breach of the substance of the skin, it was obviously fast approaching to that state. Wishing to see

the genuine effect of the use of pure water on such a case, I prepared it for her myself, and she used it regularly during the remainder of her life.

On its first adoption the stomach was very much relieved. She said, that she felt as if a cord had been unloosed round her body. The whole breast seemed to become more moveable, and to her own feelings less tightly bound to the side.

September 26. The lips less purple, and the health improves. The pain has left the arm. A small tumour has appeared in the axilla.

October 24. The discoloured portion of the skin more vivid, and the whole appearance of the breast improved. The scab separating, and sanies oozes from the part detached. Some pain in the axilla.

November 21. The scab has risen above the surface of the neighbouring parts. Some vesicles formed on the skin contiguous to it.

December 28. The scab still a good deal raised. During these months the breast swelled considerably, the tumefaction proceeding upwards, towards the clavicle, and laterally, towards the sternum. At this time, too, the contracted limb had become less benumbed, and she had regained some use of it.

February 25, 1806. The skin, contiguous to the original scab, converted into a scab; and, around this last, it is very hot and inflamed.

March 21. The top of the original scab crumbles away, and pieces fall out of it.

April 20. Great heat in the superior part of the tumour. The tumefaction increased.

May 13. The cuticle separates from the superior part of the tumour, and there is a serous discharge from the denuded skin. But the health seems to improve. The lips are no longer purple.

May 28. The original scab has entirely fallen off, and the skin underneath seems

perfectly sound. In the mean time, the superior part of the tumour has sloughed extensively; it has often bled, and discharged a copious serous matter.

July 2. The tumour had now become an open Cancer of very large extent, being a deep hollow ulcer; its edges thickened, and its base irregular. It extended much beyond the glandular substance of the breast; and had four sides, an inferior, which was nearly transverse, a superior, and two lateral and perpendicular sides. That towards the sternum had a very thick projecting edge; its base was situated nearly at the junction of the sternum with the cartilaginous extremities of the ribs. The superior was merely a thickened and discoloured ridge; but the thickening and discolouration extended to the clavicle, and lay in part upon that bone: the posterior edge was not thickened, but the skin was curled back completely; there was some schirrous substance on this side, a little beyond the edge of the ulcer: the inferior edge was no more than a thickening forming a perpendicular wall to the ulcer at this part. The part, which had been a scab, and was now skinned,

was situated at the inferior and posterior angle of the ulcer. There was, moreover, a deep sinus running obliquely towards the clavicle, from the superior angle of the ulcer next to the sternum.

Such then were the limits of the Cancer; and for the remaining fifteen months, during which she lived, to these limits it continued to be strictly confined. Whatever were the changes that afterwards took place, they were wholly within the circle of these limits.

Till this time, she had used the common diet of the house; which allows solid animal food only three days in the week, and animal broth on a fourth: on the remaining days the diet is vegetable. But now she was restricted to a little animal food on Sundays; and directions were given soon after for her whole diet to be strictly vegetable; nor have I any reason to believe, that this injunction was not properly complied with.

Notwithstanding this great sloughing from the breast, and even far beyond it, the health

at this time seemed rather to improve; and she had recovered so much use of the contracted limb, that by the help of crutches she came down stairs, and came to my own house weekly during the whole summer and autumn of this year.

August 6. The ulcer is still become deeper and wider in every direction, by the separation of fresh sloughs. Its base is become clean. A small piece of fungus has risen up near the lower extremity of the anterior ridge: its height is about the level of the contiguous ridge; but its summit is little larger than a pea. Some minute red spots like granulations surround its base. The lips of the ulcer bleed a little two or three times a day. The bleeding relieves the pain.

August 13. The sinus, running upwards towards the clavicle is very painful, and the edge of the ulcer over it quite inverted. In all other parts the sore is without pain; the general tumefaction is much lessened; and the depth of the ulcer gradually becomes less, not by any filling up of the base, but by the

edges subsiding, and approaching to the bottom. The little red granulations have disappeared.

August 20. The irregular flesh at the bottom is removing by sloughing. Some more minute, red, granulating spots, like those round the fungus, (August 6. 1806) formed. Their formation was preceded by rigor and fever, and some diminution of appetite.

September 10. The sinus (July 2, 1806) reaches almost to the clavicle. Still there is much bleeding.

September 25. A very large slough has come out from under the skin, at the superior edge of the ulcer, this morning. This has very much diminished the uneasiness at this part.

October 2. Some more films have come out from under the superior edge. Granulations have formed at the bottom.

October 16. Great pain in the angle next the axilla.

October 25. The angle next the axilla is very foul. Yesterday there was considerable bleeding. Much granulation, at the central and inferior parts of the ulcer, was formed last week.

October 29. The hollow formed by the projecting edge along the sternum is filling up: by this, the basis of the ulcer seems to become less.

November 12. The irregular flesh, at the bottom of the ulcer, entirely removed, so that its base is smooth and level. The small piece of fungus (Aug. 6, 1806) has been for some time gradually shrinking in size and in height, and at last wholly disappeared, and was confounded with the surrounding granulations.

November 26. The hollow under the ridge along the sternum is filled up by granulations; and the thick projecting edge removed by a gradual insensible wasting; so that the skin is become continuous with the ulcer. A sinus has formed under the lower part of the posterior edge.

December 3. A recurrence of feverish

symptoms, issued in by rigors. All the parts seem in great activity; a slight redness has appeared on the sound skin surrounding the diseased parts.

December 10. The size of the ulcer is elongated towards the axilla. She has had considerable fever the whole week. The redness of the surrounding skin has increased.

December 17. The redness of the surrounding skin has become what may be termed a large inflamed *areola*, of the breadth of a couple of inches The ulcer in various parts is granulating with great activity. Considerable pain shoots down the arm, the motion of which is lost. The edges of the posterior side of the ulcer, which had been completely retroverted and curled back, have turned forward again in their natural direction, and have become united to the parts below, by a sort of granulation proceeding from their internal surface. The whole ulcer is still hollow, but much less so than formerly; the base having been raised by granulations, and the skin gradually sinking to the base.

January 7, 1807. A fresh access of fever, and more erysipelas round the inferior edge of the ulcer. The pain great.

January 14. The fever diminished, and the heat and redness subsiding.

February 11. Some of the granulations which had been thrown out by the skin, which had been retroverted, (Dec. 17, 1806) have sloughed away. The superior edge of the ulcer becomes elevated, rigid and projecting. The inferior edge has for some time shown in parts a disposition to skin.

February 18. The sinuses have filled up, both the anterior and posterior. At the inferior edge there is no thickening, but the sound skin is on a level with the ulcer, and seems disposed to cicatrize. The pain is confined to the superior part of the sore. The whole ulcer is become much flatter than formerly, by the skin having all around become closer to the sides. The scabbed part, which cicatrized, (May 28, 1805) not having sunk as much as the surrounding parts, seems ele-

vated, and has thence assumed a warty appearance.

February 25. Violent pain has in the superior ridge, extending down the arm; which has swollen, and its motion become impaired.

March 4. The pain has subsided. An inflamed areola has again appeared round the whole ulcer. The pain, swelling, and immobility of the arm continue. Otherwise, she makes little or no complaint of her health; though the strength seems gradually to decline.

March 18. The swelling of the arm quite gone, and it is less cramped and feeble. Much granulation at the superior part of the ulcer.

March 25. The tumour on the clavicle is subsiding, and the whole superior ridge is becoming soft and flexible.

April 1. Much more granulation has formed at the superior part of the ulcer.

April 8. The pain has greatly abated. The

tumefaction of the skin contiguous to the clavicle is quite gone, and the skin has fallen down in the form of a loose flap.

April 15. The sore continues easy and its base rises. The sinus in the posterior edge has again broken out.

April 22. Part of the skin over the sinus has ulcerated away.

May 6. The loose flap of skin (April 8, 1807) is again swollen.

May 13. The sinus (April 15, 1807) is again filling up.

May 19. The inferior edge of the ulcer (which has for several months been on a perfect level with the contiguous skin, and without any tumefaction or thickening) has cicatrized through its whole length. At the superior angle, next the sternum, some skin has ulcerated away, so that at this point the sore has spread, perhaps a third of an inch, into a part, which previously seemed sound. A small carcinomatous ridge is formed at this part.

The strength keeps pretty uniform, but the breathing seems to become more laborious and elevated.

April 26. The new formed skin, at the inferior edge of the ulcer, has come away. Great heat and inflammation at the superior flap. Some of the granulations slough away.

June 5. A large inflamed areola has again formed round the ulcer. The inferior edge has again cicatrized.

June 12. She complains of loss of appetite, and frequent chills. Many of the granulations perish, the bottom of the ulcer being perforated with circular holes. Much heat and pain at the flap of skin hanging from the clavicle. The arm is again motionless.

June 17. The appetite is still very bad. The flap of skin has begun to perish by ulceration in its centre. The arm is considerably welled.

July 1. The new formed skin has again peeled off. The ridge next the sternum is much swelled. Much tumefaction also about the

angle next the axilla, and down the posterior or ridge. Under the flap of skin, the ulceration has gone deep, reaching at one point near the clavicle, and forming a very large and frightful cavity. She has considerable lowness, and some pain at the stomach.

July 8. The inferior edge of the ulcer has again skinned, and a thin skin is formed over the ridge along the sternum. The appetite languishes, and there is much general indisposition and debility. The legs swell, and the body is much emaciated.

July 15. A large slough has separated from under the clavicle itself, from which a sinus runs up towards the trachea. Three days ago, she brought up a quantity of tough phlegm, by hawking, which gave the idea of something having broke in her throat: she has long experienced some difficulty in swallowing.

The skin, which had been retroverted on the posterior side has ulcerated away, leaving a regular sharp edge, as if cut by a knife. At the inferior part, the cicatrization has ad-

vanced upon the ulcer; and some skin, which had been retroverted, is come forward, and is to appearance quite sound; but its colour is not natural, being of a purplish red. She is very low, with much occasional fever; and the appetite is very small.

July 22. The thickened ridge along the sternum is removing by ulceration. The health again is better, the fever diminished; the hole under the clavicle has filled up.

July 29. The ulceration of the anterior ridge is completed, so that for the greater part of its length the Cancer is at this part wholly removed; and the ulcer on a level with the skin of the sternum.

August 12. The cicatrization at the inferior edge is creeping upwards, and advancing upon the anterior edge. At a superior part of this edge there has been a large slough. The flap towards the clavicle is entirely removed. In consequence of all the changes which have taken place for the last six months, the superficies of the *Ulcer* is about double of what it was at that time, though the

boundaries of the *Cancer* are precisely the same.

August 19. The pain of the superior parts is much assuaged. The part that seemed warty (Feb. 18, 1807) has begun to perish by ulceration. It had always been hard, and has lately been painful upon pressure. Skin has formed upon the anterior edge, but the new skin is rather higher than the adjacent sound skin.

September 9. The part which had appeared firmly cicatrized at the lower part of the anterior edge, is removing by ulceration; before it ulcerated it tumefied greatly. The warty part is about half gone. The anasarca of the arm is diminished. The breathing seems a little improved.

September 16. The anasarca has entirely quitted the left arm; but two or three days ago she was seized with a very severe pain in the other, above the elbow; it has swelled, and given her two very painful and restless nights. She is very low with a disposition to faint.

September 23. She has been confined to the

bed the whole week with lowness and fever. The fever is sometimes very high; and the arm of the affected side has been observed to be much hotter than the rest of the body.

September 30. The superior part of the anterior ridge now is removing by ulceration. This is the part where the ulcer had seemed to spread (May 19, 1807). It had skinned over before it began to perish.

October 7. She has been unable for the last fortnight to quit her bed. The granulations are now at the superior part of the ulcer, above the surface of the skin, and of a fiery red colour. But the inferior parts look kindly and healthy. The appearances of skinning are quite gone from every part of the ulcer. She has much fever.

October 14. A small lump, which was under the skin of the posterior side, has sloughed away; and the skin over it has come away with it likewise. Her fever has abated. The inferior edge of the ulcer has suddenly tumefied, and has become very painful. The

tumefaction is greatest near the warty part, and seems to proceed from it.

In the course of the week following she had frequent shiverings, followed by fever; the pulse quickened; the tongue became dry and clammy; and the breathing difficult. On the night of the 23d, having suffered a very severe rigor the preceding evening, she died.

At the time of her death, every particle of cancerous matter was removed from the edge next the sternum; and from the inferior edge, except the warty part of the inferior and posterior angle, of which a small portion remained. At the posterior side, for a considerable part of its length, the sound uncontaminated skin was on a level with the ulcer, and the edge seemed healing; but the upper portion continued thickened, though much less so than it had been; at the clavicle there was a considerable portion of the skin retroverted upon the neck. There was still a very large discharge, but it was entirely purulent. There had been no bleedings for several months. The ulcer was never observed to be fetid,

except when some of the diseased parts were perishing by sloughing or ulceration. It was generally observed, before these processes took place, that the place first became painful, sometimes to an extreme degree; afterwards it inflamed and swelled; the removing of the part was the last process. The axillary glands continued enlarged, but they gave little or no uneasiness.

In this case, the parts, which had been deeply contaminated, though their diseased condition was not obvious to the eye, or by any sensible external sign, were not prevented from falling into diseased action. They thickened, swelled, inflamed, ulcerated, and were ultimately removed. This observation is contrary to what happened in the former case of Mrs. J——s; and also in several others, which will presently be related. It is probably to be attributed to the age of the subject. In another subject, still older, (a gentleman of seventy-two) I saw a cancerous tumour, which occupied one side of the nose, gradually creeping round to the other in the course of a few months, though he used distilled water rigorously; and, if he did not

wholly confine himself to a vegetable and milk diet, he at least used animal food very sparingly.

If, however, in the case of this aged and debilitated woman, the regimen did not prevent the Cancer arriving at a certain limit, and then ulcerating, it changed the nature of the ulcer, after it had ceased to slough: from a *fungating* sore it was changed into a *granulating* sore. We have seen that some fungus was formed; (Aug. 6, 1806) and it seems probable, that the little red spots, which first rose out of the base of the ulcer, at another point, (Aug. 20, 1806) were likewise the minute embryos of fungus; for they were exactly similar in appearance to those which had formed round the base of the fungus.

The Cancer having attained its limits, never spread further for the space of fifteen months. One observation only seems to contradict this assertion. It is that which occurred (May 19, 1807), where it is remarked, that a small carcinomatous ridge was formed, about a third of an inch nearer the sternum than the old limit. But the point where this appeared,

was exactly at the orifice of the sinus, which had penetrated almost to the clavicle, and which had afterwards filled up. (July 2, 1806, and February 28, 1807.)

What happened to the other breast is equally deserving of notice. In the early part of the year 1807, she perceived a swelling under the arm-pit of the right-arm, and some time after auother appeared under the clavicle, not far from its junction with the sternum; which doubtless was a swelled lymphatic gland in that situation. They were both very painful, and that which was within sight was considerably inflamed. At the same time, the breast itself became very uneasy; it gradually diminished in size; and in the course of no very long time, the whole gland was completely removed by absorption; the skin becoming flat and closely applied to the pectoral muscle. After this, the absorbent glands began again to diminish; that under the axilla returned nearly to its natural standard; and the inflammation of the other subsided.

It is extremely evident, that under com mon regimen, this breast would have become

cancerous; and the fact therefore goes very far towards proving that there is a condition of imperfection, to which living parts are subject, and which exists long before there is any evident disorganization, or any pain or uneasiness, by which the mind can be rendered conscious of the bodily defect. It is probable then, that in the case before us, the formation of Cancer in the breast, which was apparently sound, was prevented. Something similar having happened in the case of Mrs. J——s, render this probability still higher. Those, who are ready to ascribe such consequences to any substances applied to the surface of the body, have formed, I think, ideas of the operations of such substances equally unfounded and extravagant. As the true Cancer, though in an incipient state, and in its most inoffensive form, does not yield in the least to such applications, the supposition of their possessing efficacy at a still earlier period is unsupported by analogy, or probability.

Though the constitution was, in the case just related, unequal to the cure of the disease, all the successive changes seemed a series

of efforts directed to that end. Such were the cicatrization of the scab; the granulation of the ulcer; the turning forward of the skin, which had been retroverted; the filling up of the sinuses; the skin surrounding the ulcer gradually subsiding to the level of its base; above all, the repeated cicatrization of the inferior parts of the ulcer; and lastly, the almost entire separation of the diseased parts from the sound. This last event was the signal for dissolution, the powers of the system being unequal to the processes necessary to restoration.

CASE III.

ELIZABETH Hunt, aged 50, a pauper also in the same work-house, had been affected with a Cancer of the right breast, for which the gland had been extirpated. After three or four years, a tumour of about the magnitude of a filbert, appeared on the lower part of the sternum. It was of a livid red colour, and gave little uneasiness. After some time the tumour sloughed out, leaving the surrounding skin with a regular smooth edge, as if it had been cut with a knife; but detached all around from the cellular membrane underneath. The ulcer seemed to have little sensibility, and its surface was commonly dry. A part of the cicatrix also, towards the armpit, had become ulcerated about the same time.

She had a cough, her respiration was diffi-

cult, and she seemed emaciated; her pulse was about 120; but her muscular strength was not greatly impaired.

She began to use distilled water, October 12, 1806, and she used it for thirteen months; which was the remainder of her life. I cannot say that it produced any sensible beneficial effect upon the health. She gradually became weaker, and so much emaciated, as to be reduced to a perfect skeleton. Her cough also grew worse, and was in the end attended with an abundant expectoration. She had frequent vomitings; and was liable to sudden attacks, the symptoms of which I could not obtain a distinct account of.

But the effect upon the ulcer was unequivocal. To the eye it seemed for a time to spread, so that after some months its apparent superficies was double perhaps to what it had been at first. But this appearance was owing merely to the ulceration of the loose skin, which had been detached from the parts underneath. When that was removed, a regular margin was formed to the sore, with a considerable thickening of the edges. The sensi-

bility of the sore increased during the course, and it secreted much more copiously. These circumstances seem to indicate, that the thickening, which takes place round these sores, is to be deemed a salutary process; nature, where such thickening is wholly absent, making no effort to restoration.

The phenomena of the ulcer of the cicatrix proved the influence of the water still more distinctly. During the thirteen months that she lived, it shewed no disposition to heal; but it did not spread in the least.

About the tenth month, several tumours appeared on various parts of her body. They continued indolent, and gave no uneasiness.

It is necessary to observe, that this patient did not even adhere to the regular diet of the house, which, it has been said, excludes animal food three times a week; for she had friends, who supplied her plentifully with whatever she chose to have. Desponding entirely of her recovery, and being a woman too of very feeble intellects, I could not prevail

upon her to lay the smallest restraint upon her inclinations.

Common parish workhouses afford the most admirable opportunities for subjecting diseases to any variety of regimen. The operation of diet is so slow, that little can be done in regular hospitals. There is in the metropolis one institution for the professed object of verifying any facts supposed to illustrate the nature of Cancer; or to afford a prospect of curing, or relieving it: I mean the *Cancer Ward at the Middlesex Hospital.* If I have not been so fortunate hitherto as to make the gentlemen, who have the superintendence of this institution, enter into my views on this subject, I have the satisfaction of being conscious, that I have taken much pains to assure them of the authenticity of the facts, upon which they were founded. *

* When I published my "Inquiry into the Origin of "Constitutional Diseases," I sent a copy of it to the late Mr. JOHN HOWARD, from whose notes to "the Plan for the "Relief of Cancer, at the Middlesex Hospital," I had reaped much instruction. But I had not the satisfaction to receive the smallest encouragement, or even notice from that gentleman.

CASE IV.

I NEED but very briefly mention a deplorable case of a young woman, who pursued this regimen two or three months, in year 1806, unless it be as a specimen of the immense ravages the disease will sometimes make in a very short time. Her age was not more than thirty-six. Her right breast had been schirrous about nine months before the skin gave way. In about ten weeks a considerable quantity of the skin was removed, and the parts underneath appeared perfectly rotten, and emitted a most offensive odour. In a fortnight or three weeks it sloughed down to the pectoral muscle, and the ulcer seemed to go deep upwards towards the clavicle. The lymphatic glands were tumefied. The other parts of the gland were wholly schirrous. She died in a very short time.

In this case, there was no thickening of the skin, nor in consequence, any tumid edges to the ulcer. Again, therefore, it appears, that such thickening of the surrounding parts is a sign of a more vigorous state of the system, than where such symptoms are absent. The disease did not spread, under the course; but, on the contrary, the colour and appearance of the margins of the ulcerated parts sensibly improved.

CASE V.

THE same fact appeared also in another case, in which the regimen was continued long enough before death to make its influence more evident.

October 16, 1806. The patient, M. P., a widow about 53 years of age, has had the whole of the left breast schirrous about nine months. The whole of the gland is denuded of skin, and covered with fungus. The discharge is copious and puriform. There is some inflammation on the skin upwards, beyond the diseased parts. Below, a number of inflamed circular tubercles are dispersed round the breast, some of which have the apex ulcerated. The right breast is also schirrous. The absorbent glands are unaffected.

She was in a state of much debility, the pulse was quick and feeble; the appetite languishing, and she had occasional sickness.

She had also a short dry cough, and her respiration was considerably impeded.

By adopting the regimen, the inflammation which surrounded the diseased parts was subdued. The substance of the gland continued to waste. Some of the fungus came off, but it was succeeded by fresh crops. There was no farther ulceration of the skin, nor spreading of the disease for the three months, during which she lived. In this time, the skin over the right breast suffered an uniform depression all across the glandular substance, something like a wave; this was effected in the course of a very few days. The axillary glands of this side became swelled; some more tubercles, like the heads of nails, appeared on the neighbouring skin; of some of which the apex ulcerated.

Towards the end of January, 1807, she was seized with sickness, diarrhœa, a total loss of appetite, and a great prostration of strength; and in a very few days she died.

These cases concur in proving, undoubtedly not all of them with the same degree of

force, that the spreading of Cancer, whether it be in the form of tumour or of ulcer is solely the effect of common water upon the system. The first, second, and third cases go directly to establish this point; in all of them, the use of distilled water was continued long enough not to admit the chance of being deceived by a fortuitous occurrence: in the fourth and fifth, the effects were the same; but the fatal termination supervened too quickly to allow much weight to be given to these observations, had they been unsupported by more decisive evidence. But if there should remain a shadow of doubt on this most important point, after the evidence which has been already produced in its support, it must wholly vanish when supported by that afforded by the following case; in which the same truth appeared steadily and uniformly during the long period of nearly three years and a half. If the relation of circumstances, which occupied so great a length of time, be somewhat tedious, this will, I trust, be excused by those, who duly appreciate the momentous importance of the conclusion to be drawn from them.

CASE VI.

A SINGLE lady, of between thirty and forty years of age, received a blow on the right breast from a man's elbow in a crowd. It was when walking to see the illuminations on account of the peace of Amiens; and towards the latter part of the year 1803 it became considerably swelled. It was neglected for some time; but it had increased so much in the year following, that she applied for professional assistance; and consulted Mr. ABERNETHY, who was a friend of her family. He judged the disease to be Cancer, and advised the extirpation of the tumour, as affording the best chance of prolonging her life. Being unwilling to undergo this operation, Mr. PEARSON and Mr. HOME were likewise consulted. Mr. PEARSON coincided entirely in opinion with Mr. ABERNETHY, as to the nature of disease: Mr. HOME, however, said,

that the tumour did not, in his opinion, possess all the characteristics of Cancer.* But both these gentlemen were adverse to an operation, which accordingly was never performed.

In October 1804, the tumor broke, and the health, as commonly happens, began to decline more sensibly. In the spring of the year following, the disease, which had continued to spread, had arrived at an enormous magnitude. At this time, Mr. ABERNETHY, who had continued to attend her, advised her to adopt the use of distilled, instead of common, water, as the basis of all the liquids she made use of. He was so good also as to obtain her permission for my attendance on her; a favour for which I return him my thanks. On entering on the course, I desired him to state how long he thought life could be prolonged, if the disease followed the customary course

* By this expression, Mr. ABERNETHY informs me, he understood him to allude to the condition of the lymphatic glands, which were unaffected. In other respects, he conceives that no characteristic of Cancer was wanting. And it will be seen in the sequel, that an induration of the lymphatic glands was likewise detected.

of cases of this nature. "A twelvemonth, I "think, is the utmost"—was the answer. That he gave it latitude enough will, I think, be evident to those, who will attentively consider the description of it I am about to give. But such an opinion from a surgeon, so well qualified to judge correctly, conveys more strongly the nature of the case, than can be done perhaps by any combination of words. I have only to add, that the same gentleman has seen the progress of the case repeatedly, till its termination.

First year. May 13, 1805. She entered upon this regimen about this time; but I did not see the case till the 21st. The tumour projected several inches beyond the natural situation of the breast. The whole gland was covered with erysipelatous inflammation, and this inflammation extended an inch and half, or two inches upon the skin, beyond the gland and the parts directly involved in the disease. Its colour was of a dusky red. The whole breast was greatly on the stretch, so that the nipple was extended so as to be perfectly on a level with the surrounding skin, and to be as large nearly as a shilling. The thickening occu-

pied the whole inferior portion of the gland down to the ribs: it ran upwards from thence, and just included the nipple. At the superior edge it again was bound down close to the ribs; and this portion was exceedingly deformed with irregular, knobby, and tuberculated matter. The swelling extended very nearly into the arm-pit. In its centre there was an oblong hole, from which a fungus issued, projecting beyond the tumour.

From this description, it appears, that there was a portion of the gland which was free from schirrous matter; namely, the portion contiguous to the sternum. But this part, as well as the other, was constantly incrusted with *sordes*, produced from a serous matter, which was perpetually exuding from the surface, a part of which seemed to coagulate upon the skin of the breast. From the abundant and apparently acrimonious matter, which was constantly flowing from the diseased parts, the skin, which was constantly moistened by it, was kept in a state of perpetual irritation and inflammation, and from the same cause had its texture somewhat thickened. There were several hot and fiery pim-

ples in the neighbourhood of the diseased parts; particularly on the ribs, towards the inferior and posterior part of the tumour. At this part it was, that she most complained of the irritation produced by the discharge. It was evident that the disease had penetrated to the pectoral muscle; since the motion of the arm was so much impeded, that she could not work. The pain was dull, heavy, deep-seated, and oppressive: she had never suffered any very acute.

Notwithstanding this great local disorganization, the general health was as little affected as could be expected. There was a general paleness, and the appearance of much debility; the irritation under which the system laboured was strongly pourtrayed in the countenance; but the strength was so good, that she could use some exercise on foot, and enjoy the society of her friends. The pulse was feeble, and varying from 96 to 110, and sometimes it reached 120 beats in the minute. There were strong signs of hepatic disease, indicated by much pain on pressure upon the hepatic region, and sharp pains darting to the right shoulder. The bowels perpetually

required medicine to procure regular evacuation; the fæces were constantly black, and the urine pale. All the affections of the system were of the kind called nervous, rather than inflammatory. A great coldness would sometimes come over her, but not followed by any heat or fever. She had been subject the preceding winter to sudden swellings of the face and eyes. The most distressing of the constitutional symptoms was the loss of sleep: this was not caused by pain or irritation; but the power of sleeping seemed almost destroyed. The respiration was habitually unaffected; but she was subject to that occasional oppression of breathing, which is the concomitant of the advanced stage of this disease.

Nothing could be more pleasing, or more encouraging, than the effects of the pure water for the first eight months after its adoption. The first marked change was upon the fungus, which began to shrink from its summit, and gradually to withdraw itself within the sides or walls of the ulcer. It perished from its summit downwards, and in consequence, the surface became covered with a brown matter; formed, I suppose, of the rudiments of the parts, which had already perished.

The erysipelas, which covered the diseased parts speedily assumed a brighter colour, and began to disappear at its margin. And at the end of six months, all which had occupied the skin beyond the substance of the gland, and the diseased and thickened parts, was wholly removed. The discharge also diminished, and seemed less acrimonious; and she experienced through the mass of the diseased parts a sense of ease and comfort; though they underwent no remarkable external change. In general too, the health, strength, and spirits improved; the countenance became more coloured, and the tongue, in particular, which, at times, had seemed almost devoid of blood. She regained also in a measure the power of sleeping; and the sudden swellings of the face and eyes never again appeared. The same is true of the occasional oppression of the respiration. Once for all too, I must observe, that from the time of adopting the use of the distilled water, the disease became wholly stationary: it ceased to spread; what has been called its contaminating power was completely destroyed.

Thus then, had we another instance of the

power of distilled water alone over the cancerous ulcer; and, as this power had now been shown for a longer time than that, during which it had been an open Cancer, and had enlarged considerably in various directions, this fact alone I deem sufficient to establish the conclusions I had formerly drawn; and to justify me in whatever I had formerly said on the subject. But to proceed:—

During the ninth month, the appearances became much less flattering. She had often been troubled with sickness, and at this time it began to harrass her constantly with a loathing of her food, and a strong disposition to vomit. Besides this, she felt sudden depressions of strength, and great lassitude: there came on likewise a ghastliness of the countenance, which seemed more than any other circumstance to portend a sinister event. The ulcer likewise began to bleed at times, and this disposition seemed to be much increasing. A slow fever, with a burning heat of the hands and feet, still more undermined her strength. At this time, therefore, I proposed to her to leave off all animal food, and to confine her-

self to a diet of vegetables and milk, using the latter substance, however, very sparingly. She gave to this advice the same cheerful and ready compliance, which she had done to every thing suggested for her relief.

Immediately upon adopting this regimen, the sickness disappeared ; nor did it ever afterwards occur at all as an habitual symptom ; though she had two or three fits of vomiting, as precursors to bilious attacks. The fever began to decline, as did the burning heat of the hands and feet. The disposition of the ulcer to bleed was also checked as speedily, and soon entirely vanished. It caused her to look still more pallid, and the features to shrink ; but it produced no real weakness; and the external marks, from which persons are apt to infer it, disappeared in five or six months.

February 13, 1806. The fungus from the base is now entirely removed ; but the walls of the ulcer preserve exactly their original form ; so that there is now a hollow cavity of several inches in depth. Fungous substance has grown from the margin of the

walls in several places, particularly from the side next the sternum, and the inferior edge. The erysipelas upon the gland is fading away, and at the same time, is of a brighter colour. On this day she began the vegetable diet.

March 26. Two small ulcerations have formed superficially on the gland next the sternum, beyond the seat of the scirrhus.

April 23. Several small ulcerations have formed near the former. The appearance of these ulcers gave reason to believe that the whole gland would be removed, as well the scirrhous part as that without the scirrhus; but in two or three months (for I do not find the exact date mentioned in my notes) these ulcerations all healed. A considerable inflammation of the whole surface attended these ulcerations.

Second year. May 21. The orifice of the ulcer enlarges by the edges of its sides slowly perishing. It fills up uniformly and gradually from the bottom.

June 11. A small tumour below the breast had swelled, and been very hot and painful,

and afterwards sloughed; in a week after the slough had separated, it healed perfectly.

June 18. Much of the thickened part towards the axilla has ulcerated away; by which the ulcer has much widened in that direction; its length is now about four inches, and its breadth varying from one to two: its depth is not great, it being very much filled up.

July 9. She has recovered the use of her right-hand so much as to use it for working.

August 6. She has had a slight affection of the bowels for a few days: it is now declining.

August 14. For the last month there has been more uneasiness in the whole breast: the part without the scirrhus became hot and swelled, with some thirst and fever, and an accelerated pulse. Much heat and restlessness at night. These symptoms lasted a week longer, when they subsided. Much more thickened matter is removed towards the axilla: in consequence, the width of the ulcer is much increased at that part, and its depth is there considerable.

September 4. She has been affected with oc-

casional chills and heats, with some thirst and fever. Sometimes she has a drowsiness.

September 11. The erysipelas over the sounder part of the gland is very nearly gone. The margin of the ulcer at this part has continued quite stationary; as has the inferior ridge. But towards the axilla the ulcer has widened still more. Before a part of the sides of the ulcer perish, its margin commonly swells considerably, so as to form a rounded mass, or nodule; after this the swelled portion partly drops off, and partly wastes insensibly. She has had a slight diarrhœa, which was removed in a few days. The health on the whole continues very firm.

October 10. The skin over the sounder part next the sternum is become wholly clear of erysipelas, and of its natural colour. The parts have contracted very slowly, so that the general tumefaction has much diminished. The hot pimples which were contiguous to the ulcer have dissappeared long since.

October 30. A sudden attack of erysipelas over the parts. Much acute pain at the upper anterior angle. Some fungus at the edge

comes off, but it has been succeeded by a new formation of the same matter.

November 6. Upon the whole, for the last two months, there has been more superficial soreness and external pain. Towards the axilla the ulcer has closed by a quantity of fungous matter, which has grown over it. There is more inflammation about the edges of the sore. Its dimensions are now about three inches in length, and from one to one and a half inches in breadth. But of course, the surrounding thickening is of much greater extent.

December 4. The superficial activity has ceased. The whole cavity of the ulcer is completely filled up by a new production, which, it is curious to observe, has at one part a perfectly smooth surface, and a convexity like the natural shape of the *mamma*. There is much fungous matter still about the edges of the ulcer, and the whole mass projects much beyond the natural level of the breast. The parts which are perishing exhale a very pungent odour; but at other times the ulcer has been always inoffensive. Very restless nights form the greatest part of her sufferings.

December 11. The skin, where it had been rough and thickened from the irritation of the discharge, is become perfectly smooth and level.

December 25. Considerable pain the whole of the last week, with some heat and fever. But the sleep is much improved, and during the last month an uncomfortable sense of chilliness is removed.

1807. January 15. The ulcer is become much more open below.

January 23. She has suffered some very acute pain along the inferior part of the ulcer: it was attended with faintness, feebleness, and loss of appetite. A watery solution of opium gave great relief.

January 30. The pain is gone, and the health is as good as before.

February 13. A return of considerable pain and soreness along the inferior edge of the ulcer, attended with some disposition to fever. The former heavy and deep-seated pain has disappeared a long time.

February 20. The pain is still very sharp at the inferior edge. It sometimes, likewise, affects the superior edge; and that next the sternum has at times given much pain in the course of the last week. The sore has bled too a good deal.

February 26. The dimensions of the sore are gradually increased by the ulceration of its edges. The inferior edge, however, simply contracts. The surface of the substance, which has filled up the former cavity, is extremely foul, and interspersed with many bloody points.

March 5. On the 27th ult., she became very yellow. She afterwards perceived an oppression of the breath, succeeded by a single short cough, and a great defluxion of watery mucus. The bowels have also been pained, with some diarrhœa. The paroxysm is now declining. During this attack the breast was easy.

March 15. The oppression of the breath is diminished, and the diarrhœa gone. The soreness is returning to the breast.

March 20. The affection of the lungs and stomach are quite gone, and the bowels are again regular. Considerable pain and much soreness in the superior part of the tumour. The discharge is considerably diminished. The strength is not quite restored.

April 16. For the last week the ulcer has been much more sore.

April 23. Very considerable pain in the superior part of the tumour, which is undermining by internal ulceration. The base of the sore is still very foul, and much fungus at the edges. Some tumefaction on the breast next the sternum; and the skin is become of a purple colour for about three-fourths of an inch from the edge of the sore.

April 29. She had a slight rigor yesterday. Considerable pain in various parts of the ulcer.

May 7. An ulcer has formed in the discoloured part of the skin in front, which spreads, and some of the scirrhous edge is thus removing.

Third Year. May 14. Much weakness, particularly shewn on going up stairs; so that she is obliged to sit down after the exertion. There is also some anasarca of the legs.

May 27. The strength improves. The breathlessness is much diminished. Small doses of the *Tinctura ferri murati* were of considerable service.

June 13. The strength still improves, and the appetite is even very sharp. The diseased parts have lately decayed with much rapidity. The whole ulcer is much easier. The legs are still slightly anasarcous.

July 16. By the unequal perishing of the substance, which had filled the cavity, the base of the ulcer presents many irregular depressions and elevations. The fungous and diseased parts of the edges are much wasted away, so that on the whole, the surface of the whole sore is become much nearer to the side. She has had a good deal of fever and uneasiness in the course of the week. One point of the sore is exquisitely sensible. The other parts are indolent.

July 23. The feverishness is gone. The anasarca diminished.

August 13. A slight affection of bowels. The ulcer nearly as before, except that the whole surface is become sore and tender. The quantity of scirrhous matter on the sternal side is much diminished.

August 28. The bowels are rather uneasy and loose. The anascarca is rather increased.

September 10. In one point, at the superior ridge, the discoloured part of the tumour is quite removed to the part of the skin, which is of its natural colour. The stomach complaint is gone, and the strength improved. There is still some anasarca.

September 24. A large quantity of substance has sloughed out of the body of the ulcer. There is pain at the sternum, at a distance from the diseased parts. The health and strength are improved. The anasarca is gone.

October 8. The diseased parts are still slowly perishing.

November 5. The scirrhous edge next the sternum inflamed as far as the nipple. The superior edge deeply undermined. The ulcer contracts in every dimension.

November 19. A severe bilious attack ushered in by vomiting. Pains of the bowels. The skin became very yellow, but not from any effusion of bile.

November 23. The attack subsiding.

December 5. A slight return of vomiting and diarrhœa yesterday. Though these attacks have been severe, she has experienced little weakness from them.

December 31. A large portion of the thickened edge next the sternum is removed by ulceration. This part had repeatedly thrown out fungus; but from this time, the base being removed, no more was produced. Along the inferior edge there is still a large quantity of fungus, which is entirely retroverted upon the side. Towards the axilla, the thickened parts are much swelled and disposed to ulcerate.

1808. January 27. A part of the superior edge is removing by ulceration. The skin, which is apparently sound, first becomes discoloured, and afterwards the solid parts are removed. Much of the mass towards the axilla is likewise removed. The right-hand has swelled a little; and there is great superficial soreness. The appetite is good; sometimes it is quite sharp. The bowels are regular without medicine. Though, by the removal of the sides, the ulcer extends, its superficies is nearly the same, by the contraction of all its parts.

February 24. She has suffered very severe pain at the upper part of the arm, internally. The fingers have swelled a little. There has also been a trifling swelling of the ancles. The tumefied and reddened parts towards the axilla undermined. She has had some sickness, vomiting, diarrhœa;—slight fever. The appetite failed.

February 29. The diarrhœa is diminished. The appetite is returning.

March 10. The diarrhœa is gone. The

strength is recovering. The right-hand is considerably swelled.

March 17. A few days ago she had suddenly a very large expectoration from the lungs. The appetite is much improved.

March 25. Every particle of the original tumour, as far as it was discoloured, is now removed by spontaneous ulceration. A thickened edge still remains, of which the incumbent skin was not discoloured; but much of this is also removed. There is some return of diarrhœa. The matter voided seems pure bile.

April 7. The diarrhœa is gone. The health is very much improved. The appetite is keen. The pulse natural.

April 21. The sore is much contracted, and quite easy. The discharge is very much diminished. The bowels are regular. The health, in general, is extremely good, as far as can be determined by absense of suffering. But the strength is, upon the whole, very nearly as when she began the course.

Fourth Year. May 19. Now that the general tumefaction is diminished, and the great body of the diseased mass is removed, a tumefied gland in the axilla is readily to be felt.

June 10. The edges of the ulcer are become very sore and painful. The swelling of the hand is much diminished. The discharge is increased.

June 16. The thickened edge is become hot, painful, and tumefied all round the ulcer. The anasarca of the hand is very nearly gone.

June 23. There is still severe pain and soreness round the edge of the ulcer. The cough and expectoration are much diminished.

June 30. The pain is subsiding, and the tumefaction diminishing. The cough is increased in violence.

July 7. The cough is still violent, and there has been much expectoration the whole week. Some fever and pain of the chest. The voice is hoarse.

July 14. The oppression of the respiration is gone, and the cough is relieved. The whole of the foul granulations, which had filled up the original ulcer, have come away. The sides or walls of the Cancer having perished, its form is changed from a projecting cavity several inches deep, to an open ulcer nearly superficial. A fresh thickening of about a third of an inch has formed round the original thickening. The fungus on the inferior ridge is still fixed, but the ridge itself is less weighty and more moveable. There has been no ulceration at this part during the whole disease; but it has gradually and slowly contracted to nearly its natural dimensions. The part of the gland, which is without the scirrhus, has contracted wholly to its natural dimensions. For the last three months, the countenance and the health have been, upon the whole, surprisingly good.

July 21. The appetite has been lost the whole week. She has suffered some sorenesss over the abdomen, and disposition to sickness. A light diarrhœa has come on, which seems to give relief.

July 28. The symptoms are subsiding. She perceives a tenderness of the integuments round the ulcer, which extends even to the other side of the body. There has been pain in the ulcer for two days.

August 2. A small slough has separated from the basis of the ulcer, with a discharge of blood: a rigor, followed by some fever, attended this process.

August 10. From this time, a new set of symptoms took place, from the effects of which she recovered but very imperfectly; and which were followed, in no great length of time, by her death. The whole breast, including every part of the surrounding scirrhus swelled, and the base seeming to swell more than the sides of the ulcer, the whole became nearly level. This tumefaction was attended with a total loss of appetite, pretty severe head-ach, and fever; and the sleep was extremely disturbed. Her cough was much aggravated, and, by its violence was occasionally very distressing. Though sleepless, she was drowsy, and had sometimes involuntary startings. No fresh thickening formed in consequence of

this swelling of the parts. Two small swellings had formed in the part of the breast that had become sound, a little before this tumefaction of the diseased parts took place. They were without pain or discolouration.

August 23. A small slough has separated from the bottom of the ulcer. The tumefaction diminishes, and the head-ach is nearly gone. But the appetite is still lost, and the cough severe. The nights are restless, and the weakness considerable. The ulcer scarcely has any discharge.

September 10. She continues to be pale and feeble; but the appetite improves a little, and the sleep is less disturbed. The superior part of the ulcer shewed, a few days ago, a disposition to cicatrize; but it has disappeared, and the whole superior edge is undermined very nearly to the extreme margin of the disease. A small portion of the part next the sternum also cicatrized, and became covered with a white cuticle; but this presently disappeared. The fungus along the lower edge is shrinking, and falling off. The ulcer

has ceased to secrete, except a small quantity of puss-like matter from its central parts.

September 23. She has had diarrhœa, which seems purely bilious, for two or three days. It was soon checked by proper means. The ancles swell a little.

September 29. There is some return of fever and diarrhœa. The hand is rather more swelled.

From this period the strength began to sink more rapidly. The cough was less troublesome, but the breath became more straightened, and the expectoration diminished. Little change took place in the local disease, but the small portion of it (comparatively speaking) that had not been removed by the slow perishing of the diseased parts, retained the proper characteristics of carcinoma to the last.

She expired, October 8th, most placidly, having been confined to her chamber and her bed no more than three days.

It may be useful to bring together into one

point the most prominent circumstances of this case, the long duration of which has obliged me to entet into a detail, that may appear tedious. In six months, all the erysipelas, without the disease, was removed. In nine, the fungus arising from the base of the ulcer, which had begun to shrink immediately after the adoption of the distilled water, was wholly removed; and the ulcer was changed to a large and very deep hollow chasm. In fourteen, the power of using the arm was restored;—a power shecontinued to retain to the last. The anasarca in the last year was trifling in degree, and rather unseemly than a real inconvenience. It never went farther than the hand. In between sixteen and seventeen months, all the parts which were reddened and inflamed about the main ulcer, the hot fiery pimples, the parts from which there had been a constant acrimonious discharge, and which had been incrusted with a foul matter, and which subsequently had broken out into several small ulcers, had become to the eye perfectly sound and healthy; and this appearance they retained to the last.

And this was nearly the whole real benefit

that was received, if we except the almost entire cessation of pain, and the stopping of the discharge; two circumstances which extremely promoted her comfort. But the ulcer itself proving incurable, the other changes were such merely as would take place in a cancerous ulcer of this description, and which preserved its nature till the end. These changes consisted in the filling up of the ulcer with a new production, to which it is hardly proper to give the name of granulations, though I know of no other which can be assigned to it. This process was completed at the end of nineteen or twenty months. Afterwards the whole gradually and slowly perished. The extreme and superior parts perished first; and this went on uniformly. The whole tumour, at the same time, contracted in every dimension, so that, at length, the parts were either wholly or very nearly of their natural size and shape, except for the thickening, which formed the margin of the ulcer. By this eating away of the diseased parts, the whole of the original mass was removed at the end of two years and ten months very nearly. At the end of three years and two months, the ulcer seemed to be a second time

cleared of the substance which had been generated upon its basis; and in some parts, the edge was removed by the ulcerative process to parts, which to the eye were sound. And the sides, or walls of the Cancer, having in part perished; particularly towards the axilla, all along the superior edge, and partially (though not very much) along the edge next the sternum; and in part contracted; particularly along the inferior edge; the form of the whole was changed from an immense and deformed mass, filled first with fungus, then having a cavity of some inches in depth, to an ulcer of little depth; or which rather would have been nearly superficial, except for the thickened margin, with which it was surrounded. Till this time, that is to say, for three years and two months, I could not perceive that the disease had spread at any point whatever. Now a small fresh thickening took place, certainly in the parts next the sternum; and I am inclined to think towards the axilla, and upwards towards the clavicle.

The circumstances immediately preceding death need not be repeated. They seemed to be an effort at closing and cicatrizing the part;

and the constitution sunk under processes, which it was not able to complete.

Thus then, for the long space of three years and five months, was this disease made strictly local. Nor is the thickening, which took place three months before death, any contradiction to this fact. It is perfectly well known, that for a certain space around a cancerous tumour, a portion which has not yet begun to swell, nor to betray any external sign of diseased action, is contaminated ; and that it is necessary in operations to remove a portion of the surrounding gland, as well as the immediate tumour. The thickening then took place only through this diseased and contamined part.

All the essential benefits gained to this, as a local disease, were from the use of the distilled water. The cancerous disease was confined and prevented from spreading by its use, and by it alone, though the patient continued to use animal food.

Still the animal food had a very considerable influence on the condition of the ulcer.

Almost from the day, on which it was left off, the hæmorrhages, which were become both troublesome and alarming, ceased; and I suspect that the small bleedings, which two or three times afterwards recurred, were owing merely to the separation of small sloughs from the basis of the ulcer. Though, therefore, I have perfect evidence (as will speedily be noticed) that scirrhous tumours may be removed by absorption, notwithstanding the patient continues to use animal food, I suspect that, even in favourable cases, sound cicatrization of ulcers cannot be effected without the adoption of a very strict vegetable regimen.

But the effects of this change on the constitutional symptoms was much more strongly marked. The habitual nausea, loathing of food, and disposition to vomit were wholly removed by leaving off the animal food. These symptoms are almost constant concomitants of of the advanced stage of Cancer, and towards its close are apt to add greatly to the distress of the patient; and they may be said to be fairly traced to their proper source.

The same may be said of the low and wear-

ing fever, together with burning heat of the hands and feet; which were completely eradicated by the vegetable course. She had during the latter part of the disease very little fever, even during her illness. This will easily be allowed to be the natural consequence of her vegetable course.

All the signs of hepatic affection had likewise been removed, at least twelve months before her death. The bowels also had been restored to healthy action. But we cannot trace this change to their direct cause: it is probably to be attributed to the united powers of the whole regimen.

It cannot be said, that, during the whole course, the strength radically improved. It appeared to do so in the first eight months, but this appearance vanished during the ninth; and, the regimen being at that time imperfect, no proper conclusion can be drawn with regard to it. Animal food of itself causes a great inequality in the apparent strength and spirits. It is hazardous therefore to put much confidence even in the reports of patients concerning their own strength.

After the animal food was left off, there were fluctuations of the strength, according to the immediate condition of the system. But during the third year she had suffered no apparent loss of strength. On the contrary, she was able to take as much, or more, exercise on foot, as during the first, till the accession of the symptoms, which proved fatal.

Lastly, the fatal issue of this case is no demonstration that, even in this advanced stage, the disease is necessarily incurable. For a fair trial, it was too far advanced at first; and nine valuable months were lost in an imperfect treatment. The limits of the utility of this regimen remain, therefore, still to be decided.

Life was obviously prolonged, at least two years, by the use of the vegetable regimen. This, however, it is not possible to prove, and it must rest on the authority of a fallible judgment. In these cases there is every variety with regard to duration, even after ulceration has commenced, from a few months to several years. But the judgment must be taken from the state of the constitution, from that of the

part, and the previous history. I do not believe an example can be found of a case lasting four years after ulceration,* in which the whole gland was involved, the disease had spread into the axilla, the tumour was of enor-

* As an objection to this inference, from the duration of the disease, I was informed that there is at this time in the Cancer Ward of the Middlesex Hospital, a case of cancerous *mamma*, "*which has been in the ulcerated state for more* "*than four years, having remained in the scirrhous state* "*upward of two years.*" On examining this case, I found a large tumour, with the skin puckered, and that immediately over the tumour discoloured, and with slight superficial ulcerations on some parts of the surface. It is still moveable on the side, and from the health of the subject, may, for aught I know, continue three or four years longer. When I use the term *ulcerated Cancer*, I beg to be understood as meaning Cancer, of which the tumour has fairly sloughed out. For such a Cancer to last *three years* is, I believe, very uncommon. I am well aware of the cases related by WISEMAN, which lasted for life, without much affecting the health: of which Mr. PEARSON observes, "if "they were legitimate Cancers, then it may be fairly in- "ferred that pain and a bad state of health do not necessa- "rily accompany an ulcerated Cancer, and that cancerous "ulcer will heal spontaneously."—"Conclusions," he properly adds, "which it would neither tend to the credit "nor the improvement of the profession to admit."—PEARSON's Practical Observations on Cancerous Complaints, p. 16.

mous magnitude, the pectoral muscle affected, and all this mischief produced principally in the course of about a year and half. I have taken some pains to ascertain the limits of the duration of life, after a Cancer has become ulcerated by the sloughing of the tumour. But those that are recorded are mostly defective in regard to this particular. Where I have been able to ascertain the point, the period has very rarely extended to two years. I hoped to gain more precise information from the journals of the Cancer Ward of the Middlesex Hospital. But in this hope too I have been disappointed. The cases, I am informed, have been entered without any attention to the data, which would throw light upon the question.

NOW, did the doctrine and practice, which I would establish, rest wholly on observations such as these, similar in the progress of the cases, and similar too in their termination;—were experience finally to determine, that no variation of regimen can effect more in the ulcerated Cancer, than to render the disease stationary and strictly local, whilst the natural actions of the parts affected finally destroyed the system, the immediate benefit is of great magnitude; whilst it is an obvious consequence, that the adoption of this regimen in an early stage will produce what is equivalent to a cure. The disease is at first trifling: can it be retained at this point, it will continue to be trifling. The strongest characteristic of Cancer is its progressive nature. This, when the disease has become active, is unceasing, and gradually involves every contiguous part, however dissimilar in their nature, and excites them to similar action. The skin above, the muscle, periosteum, and bone beneath, besides the absorbent glands, all become eventually a carcinomatous mass; the intercostal muscles, and probably even the lungs themselves, eventually suffer from the contiguity of a cancerous breast. What then is the preventing

the disease from spreading, but direct ocular evidence, that the generation of new Cancer is prevented. It is an inference then of common sense, that whatever is proved by experience to possess this salutary influence, should be adopted as soon, at least, as the nature of the complaint is ascertained.

But this is the advice of friendly exhortation, not extorted from the disappointment of expectations too sanguine.

If there be any doubt that the spreading of the disease is truly the generation of new Cancer, an examination of the anatomical structure of the disease must put it beyond question. I will make use of the description of Mr. HOME, whose access to the preparations of the Hunterian Museum makes his authority the very best that can be obtained on this question.

Mr. HOME has described anatomically three stages of the disease. For my own purpose I shall transcribe only the first and third.* "When a section is made (of a cancerous

* HOME's Observations on Cancer, p. 157.

" tumour) in its early stage, it puts on the fol-
" lowing appearance:—the centre is more
" compact, harder to the feel, and has a more
" uniform texture than the rest of the tu-
" mour, and is nearly of the consistence of
" cartilage. This middle part does not ex-
" ceed the size of a silver penny; and from
" this, in every direction, like rays, are seen
" ligamentous bands, of a white colour, and
" very narrow, looking, in the section, like so
" many irregular lines, passing to the circum-
" ference of the tumour, which is blended
" with the substance of the surrounding
" gland." Dr. BAILLIE's description, it is well known, of the structure of Cancer in the stomach and uterus accords precisely with this. Again, " when the tumour has ad-
" vanced to what may be called cancerous
" suppuration, which, however, does not al-
" ways happen in the centre, before it has ap-
" proached the skin, and formed an external
" sore; it then exhibits an appearance totally
" different from what has been described. In
" the centre is a small irregular cavity, filled
" with a bloody fluid, the edges of which are
" ulcerated, jagged, and spongy. Beyond
" these, there is a radiated appearance of li-

" gamentous bands, diverging towards the " circumference ; but the tumour, near the cir- " cumference, is more compact, and is made " up of distinct portions, each of which has a " centre, surrounded by ligamentous bands, " in concentric circles." It appears from this description, that in the advanced stage, the circumference of the tumour is composed of a number of portions, exactly of the same structure as the central part, in the first stage. The circumference therefore consists of a number of Cancers in the state of scirrhus. It must follow, that whatever treatment prevents the spreading of the disease into the contiguous parts, is the true preventive of the formation of Cancer.

I am aware that it may be objected, that, when the Cancer has become ulcerated, it does not always make the same progress as it did before ; but it will sometimes become stationary, or even make some apparent advances to a natural cure. But in these cases, though this may happen in the part first affected, the disease has always been making progress in some other, commonly in some contiguous part. The whole disease is never

quiescent: its activity is merely transferred. Thus HILDANUS relates a case of Cancer of the tongne, in which a tubercle increased to the size of a chesnut; it ulcerated, and the ulcer contracted and closed, so that the whole seemed almost well, except a little crack. But in the mean time some glands, which had tumefied under the chin, ulcerated internally, the *frænum linguæ* was destroyed, the lip swelled, and the whole tongue itself so much, as nearly to fill the cavity of the mouth.* Mr. HOME has recorded a similar circumstance in a case of Cancer of the penis, where the disease in the gland became as it were quiescent, while the ravages committed in the groin were violent in the extreme.† But in all the cases hitherto related, (except the second, where the subject was very old) and in those still to be reported, the quiescent state extended to the whole disease; it included every part alike; it began with the adoption of the regimen, and continued uniformly and steadily, as long as it was continued.

* FABRIC. HILDANI. Observat. Chirurg. Centur. Obs. 84.

† HOME's Observations on Cancer, p. 175.

I have said enough, I think, to show the utility of this regimen in cases, even where it cannot effect a cure; it limits the disease; it soothes the pain; and it palliates several of the most distressful symptoms. But it is now my business to turn to a scene still more pleasing; and to shew, by the infallible test of experience, that both the cancerous tumour and the cancerous ulcer are really curable. The former may be removed from the system by spontaneous absorption; and the latter may be healed by the separation of the diseased parts, and the surrounding skin being drawn down, and completely closing the basis of the ulcer. We have already seen one example (in the first Case) of a scirrhous breast being nearly removed by absorption. I shall now relate two others of the same kind.

CASE VII.*

AUGUST 21, 1805. Mrs. Y——, a widow, aged 60, has had for many years a tumour in the right breast, which was originally caused by a pinch. It was in shape somewhat like a crescent, and of the magnitude nearly of two walnuts, placed together in such a manner that their longer axes made an obtuse angle with each other. Still there was but one tumour; it was hard and indolent, and felt of a granulated texture, as if composed of a great number of small tumours compacted together. The nipple was retracted, and the skin puckered. Some blood had sometimes come out of the nipple, and there had also

* I am obliged to Mr. CROWTHER for procuring me the treatment of this case.

been a serous discharge from a crevice that had formed in the skin contiguous: but these occurrences were not recent. Notwithstanding the scirrhous tumour, the bulk of the whole gland was not enlarged; but it was smaller than that of the sound breast. The axillary glands were not affected.

In this condition, had this tumour existed many years without appearing to be any material detriment to the health. She was lusty and well coloured. But still she was not without complaint. She had some suspicious uterine symptoms. Her constitutional affections were rather of the description that are called nervous, than inflammatory, being attended with pale urine and other symptoms of hysteria.

She used the distilled water nearly twelve months; and nothing could be more decided and satisfactory than the effect. Almost immediately the parts appeared to have less tension and uneasiness. In two months the nipple became more elevated, and the wrinkle of the skin in a considerable degree unfolded. In

five or six months, the little tumours, of which the whole was apparently composed, were much more distinct, so that the mass seemed splitting into different parts. In a short time after this, a large quantity of serous discharge took place from the same point, as it had formerly done; the point, from which it flowed, seemed to be the cicatrix of a small superficial ulcer, which opened afresh. At the end of a twelvemonth, the whole tumour was either wholly, or very nearly absorbed, and the skin of the breast was brought almost into close contact with the pectoral muscle.

This may be deemed an example of the milder species of carcinoma. None of the characteristics of the disease were wanting; and I may add, that it had been deemed to be such by Mr. Crowther, who had proposed, several years ago, to remove it by an operation. Had it been performed, it would doubtless have been cited as a strong instance of the advantage of early extirpation. It would at the same time have corroborated an observation of Mr. Samuel Sharp, who has said, "whoever

" will make enquiry into the history of Can-
" cers cured without relapses, will find a
" greater proportion amongst such as were of
" many years standing, than amongst those
" that were reduced to the operation, very
" soon after their appearance."* We shall hazard little by supposing, that of these cases of several years standing, a proportion were similar to that I have described; and might, like it, have remained many years more without detriment.

The success in this case, which was so speedy and so complete, must be attributed, I presume, to the scirrhus being still in a state of quiescence. It was neither enlarging, nor was the skin over it discoloured.

She left off the distilled water when the tumour was absorbed, because, she said that, she had never felt well, as long as she used it. She concluded, therefore, naturally enough, that it disagreed with her, and did her harm. Upon resuming the use of common water, these uneasy feelings immediately disappeared. So great is the difference upon

* Sharp's Critical Enquiry, p. 106. 2d. Ed.

the body between this fluid in its common state, and when freed from all heterogeneous matter; and so much are we the slaves of habit, which renders the most noxious irritations, to which we have been accustomed, necessary to our comfort.

I find that still there is some uneasiness about the part which the tumour occupied, though it is slight. This circumstance proves, I think, that the nature of the disease has not been mistaken; and I have little doubt, that it will still prove troublesome, if she be not cut off by internal disease.

CASE VIII.

JANUARY 5, 1806. Miss Y——, the daughter of the last mentioned patient, received a blow on the left breast about two years ago. The injured part hardened, and the hardness extended gradually in every direction. At present, it occupies almost the whole glandular substance of the breast, both above and below the nipple. The skin is firmly united to the tumour underneath; and the tumour is not very loose upon the pectoral muscle. The surface has a very firm granulated feel; it is uniformly spherical, and of the natural magnitude of the sound breast; the edges of the tumour are more irregular. One piece of the skin, something larger than a sixpence, had been discoloured of a dusky red. Other parts of it had little circular elevations, not much larger than pin's heads.

The axillary glands of the diseased breast were likewise swollen. To these local symptoms were added a reduced and feeble state of health, though she was not unequal to all the ordinary functions of life.

There can be no doubt that this is a genuine case of Cancer; and as such it has been uniformly considered by several professional gentlemen. It was indeed of that description, that none of them thought it adviseable to propose any measures for her relief, beyond the mere palliation of symptoms.

She had begun the use of distilled water nearly five months before she consulted me, at the same time with her mother. During this time, her health and spirits have improved considerably, and the discoloured part of the skin has been observed to become of a more vivid red. From this time she also adopted a vegetable regimen; and the complete course was continued twelve or fourteen months longer.

Nothing could be more satisfactory than the effect. The part every day became more

easy and comfortable, though at times the pain was considerable. For eleven months, from the first adoption of the distilled water, the magnitude and boundaries of the tumour had continued perfectly stationary, and a little puffing of the parts contiguous to it had disappeared. At this time, the skin directly over the tumour reddened and became hot, and there was a good deal of uneasiness in the substance of the scirrhus; insomuch, that I was induced to believe, that the parts would slough. The circumstances of Case II (vid. p. 64.) strengthened me in this opinion. But the event proved otherwise. In about a fortnight the symptoms of increased action had subsided, and from this time the scirrhus began to be gradually absorbed. The regimen was continued eight or nine months longer, during which time the pain entirely left it, it shrunk much in its substance, and the swelling of the glands of the axilla wholly disappeared. At the end of this time, feeling no inconvenience, and ascribing much virtue to a plaister, which had been applied by a female quack, she discontinued the distilled water, and again took to animal food, though very sparingly. I found it in vain to assure her that the disease

would recur, and that all the benefit she had received was from the regimen she had employed.

In October 1807, about five or six months after discontinuing the distilled water, I examined the part. It was still without pain, the health was good, and she was very well satisfied with the system she was following; a disposition sedulously encouraged by the woman under whose care she had put herself. The scirrhous tumour had wasted to one third or less of its original magnitude, the skin being drawn closer to the pectoral muscle. Whether the absorption had continued the last three months or not, I could not distinctly learn. At least, it had not sensibly increased. But it was evident that the disease was making progress. The nipple had dropped off. The part of the skin which had been contaminated, continued discoloured, and nearly as when I had first seen it. And several spots about the size of peas, and discoloured like the piece of skin over the scirrhus, had been formed in the skin contiguous to the tumour, near the sternum.

Among other motives inducing her to re-

linquish this regimen, a very powerful one was the great paleness, which, after a time, it produced on the countenance. This effect, together with the suspicion that the use of the distilled water had injured her mother's health, gave a strong force to the prejudices, which others instilled into her. This paleness of the countenance I have found to be a pretty general effect of this regimen, when steadily persevered in. It is obviously a matter of no consequence, and will in process of time disappear, and be succeeded by a more healthy colour and appearance.

This patient has left town some months, so that I can give no satisfactory account of her present condition.

CASE IX.

A WIDOW lady, aged 46, had perceived for some years an uneasiness in the right breast, and in 1802, she applied for surgical assistance for a small lump, which had appeared just above the nipple. It was attended with some pain, but neither at this time, nor since, has that been very severe. The tumour was treated with local applications, (the *tinctura ferri ammoniacalis* mixed with *spiritus vinosus tenuior*) which seemed to contract or flatten the tumour, acting most probably on the parts surrounding the substance of the tumour. During the year 1805, the tumour increased, and in February 1806, a small hole had formed in the skin, which had become discoloured, and there was a fetid matter discharged from it. At this time the regimen I have so often spoken of, was recommended to

her, but it was not adopted; and I know not what occurred from this time till the beginning of June 1807, except that the ulcer never closed, but continued to discharge a serous fetid matter; once the whole inflamed, and a number of oval vesicles came out; afterwards there was a discharge of a cream coloured matter. After this the ulcer contracted greatly; it, however, never closed, but enlarged by the gradual destruction of its margin.

In June 1807, I saw the case. The ulcer was still no larger than a half-crown piece; there was some scirrhous matter around it, but it did not occupy the whole gland; there was a sinus of some depth at the upper part of the ulcer, and some fungus round the margin. Though the greater part of the breast was occupied by the ulcer and surrounding scirrhus, yet the gland being naturally small, the whole disease was also proportionably small. The general health too was very good; that is to say, for a person with such a disease; for I have been lately informed, that her health has been delicate many years. However, there was neither muscular debility, emaciation, nor any

other appearance, threatening a speedy termination of the disease.

Here then, at length, a perfectly fair opportunity (which I had long and vainly solicited from the benevolence of surgeons) was obtained of ascertaining the effects of this regimen on the ulcerated Cancer; for the lady declared her readiness to follow my advice; and she has done so most rigorously. The result has been such as, I hope, will be perfectly satisfactory to the most scrupulous, but sincere inquirer, after the truth. It may be described in a very few words.

She left off the animal food gradually, first taking a little every second day, and, after three or four months, using it only once a-week: at present she uses none; nor has she perceived any inconvenience from the change, but has found herself cooler and more easy. Her strength is now quite as good as it was at the first.

For a twelvemonth there was little change in the diseased part; no fresh thickening took place as long as the scirrhus, which had been

formed, remained; but once in the course of the year, the same train of circumstances took place, as before the adoption of the regimen; viz. the part inflamed, a quantity of oblong vesicles sloughed out, and afterwards a cream coloured fluid was discharged. The ulcer then contracted a good deal, but it still continued open; so that at the end of the year, it was nearly of the same magnitude as it had been at first. When all the scirrhous matter had sloughed, the edges all around again thickened. About the middle of June 1808, she began to feel more pain than usual; some hæmorrhage took place; this was soon followed by a considerable degree of inflammation, attended with more pain, and a much greater discharge of watery matter; the scirrhous edges then began to soften and to come gradually away in pieces of about an inch long, and as thick as a quill. In consequence of this, the cavity of the ulcer was greatly increased in magnitude; and the discharge again assumed the colour and consistence of cream. This process was attended with much fetor. The discharge gradually abated, the ulcer contracted, and now it perfectly and completely closed up, the surrounding skin being brought down to the base

of the ulcer, and covering it perfectly. So entirely is the ulcer obliterated, that, except for some relics of the disease, about to be related, it would be impossible by mere inspection to determine the precise situation, which it had occupied.

The relics of the disease are these; a small quantity of scirrhous and discoloured substance remains, which occupies the upper parts of the original seat of the breast. It is quite loose and unconnected with the parts beneath. This, there being no ulcer, must be regarded to be a small occult Cancer. Immediately beneath this, is a ridge of an inch, perhaps, in breadth, and half as high at its summit, running downwards, and rather backwards, with a small curvature, upon the side. Its whole length is between three and four inches: it is firmly bound to the side at its top; at its lower extremity it tapers, is much smaller and looser, and it is finally lost in the skin. Along its whole length runs a deep oblique furrow, making it, in fact, two ridges placed close along side each other; the basis of the furrow has no cuticular covering, so that there is from it as much discharge as may

moisten a piece of lint placed in it. From its position, I conclude that the upper part of this ridge was an adhesion of the gland to the side. It swelled, and assumed its present form in July, either when, or immediately after that the remaining part of the gland had sloughed away. The lower part is, of course, much below the situation of the gland, and shows, in a very curious manner, what was the whole extent of the contaminated part. Besides these remains of the disease connected immediately with the diseased gland, the skin is a little rough, and tuberculated near the sternum.

This adhesion seems to have been formed very early in the disease. As far back as 1802, when first examined by a surgeon, the gland "was perfectly moveable, except a very "slight attachment just beneath the nipple, "and by this the nipple was rather drawn a "little obliquely downwards." I use the words of her surgeon, in the country, taken from his correspondence on her case.

Since this time, the disease has been stationary and quite free from pain. I saw it in

October, 1808, and have described it as it then appeared.

If the quickness and ease with which, in this case, every advantage has been gained that could be hoped for, and which has surpassed even my own most sanguine expectations, be contrasted with the circumstances of two of the former, in which month passed after month, and even year after year, with little or no progress being made, we might almost suspect that we were talking of two different diseases. But there was an important difference in the circumstances, which gives an easy and adequate solution of the difference in the progress. Besides the common advantage of a firmer state of health, it must be noted, that in the two unsuccessful cases, (I refer to cases II. and VI.) there were extensive adhesions to the side. In case II., we saw that sloughing took place under the clavicle. (See case II., July 15, 1807.) and there was therefore no healthy basis to all the superior parts of the ulcer. In case VI., in like manner, the very extremity of the disease at the superior part, towards the clavicle, was firmly bound down to the ribs; and here again, therefore, it is

probable that all the central parts of the ulcer were unsound to a depth, that might penetrate even underneath the ribs.* I shall presently show by an example, (what is indeed perfectly well known) how far this disease sometimes penetrates, even in recent cases. But, except the single adhesion, which I have noticed, and which is for a great part, perhaps for its whole length, superficial, the diseased gland, in the case I have just related, was still unconnected with the contiguous and subjacent parts. It was therefore strictly an external disease; and for almost the whole of its extent, possessed a sound, external, and uncontaminated basis.

And such, I suspect, will prove the limits of the principal utility of this regimen, not much unlike those, which have served as a rule with regard to operations. If the tumour be moveable in every direction, speedy and effectual relief may be hoped for; if, on

* I might add, that in the case of cancerous nose, to which I have slightly alluded at p. 79, in which the ulcer crept over to the other side of the nose under a course of distilled water, the ulcer was firmly bound down; and therefore I cannot doubt that the disease had penetrated to the bones of the nose.

the contrary, it has formed large adhesions, though the hope of relief is not to be renounced, it must be expected to be more precarious, and certainly to be much more slowly obtained.

I shall not attempt to heighten the impression of these three last cases by any additional words or arguments. They are really the only cases, in which this regimen has had any fair chance of success. If they do not speak for themselves in language that is irresistible, I am certain that nothing that I can say will add to their force. I shall content myself therefore with recapitulating the inferences, which may, I think, be fairly drawn from all the facts, which I have collected.

1st. The spreading of schirrous tumours into the contiguous parts is immediately stopped by the use of distilled water. This has happened uniformly in every case, in which the experiment has been made, and instantaneously in all, except in case II. where the patient was both extremely infirm, and far advanced in years.

2d, But the thickening process is not abso-

lutely prevented, but it is only suspended. In case VI. it was suspended for three years and two months, when a small thickening took place. In case IX. when the thickened edges of the ulcer had sloughed, new thickened edges were formed, which in their turn also sloughed. The thickening process is not then to be esteemed a diseased action, but rather a necessary step to the removal of the diseased part.

3d. Scirrhus tumours, by the use of pure water, are removed from the system by absorption. This appeared in cases I. VII. and VIII. There is no restoration of the diseased part to its original healthy condition, but there is a complete loss of substance, which, it is probable, will continue through life. To produce this absorption, it is not necessary to confine the patient to vegetable food, though a regard to the general health would render it advisable to adopt this measure.

4th, Cancerous ulcerations may be cicatrized by the combined use of distilled water and a vegetable diet. In case I. in which the animal food was continued, I suspect the parts

would not have become quite sound. But in case VI. though ultimately fatal, several ulcerations cicatrized, and continued sound through the remainder of life

5th, A cancerous ulcer of large extent has been healed by the surrounding skin closing over and becoming bound down to the basis of the ulcer. The health too being at least as good as when the patient entered on the regimen, life, it is probable, may be prolonged to an indefinite extent.

What, however, may be the limits of life in systems which have suffered so destructive a disease,' cannot be determined but after a long series of years. To professional men it is a matter of inferior consequence; since our whole duty consists in discovering what is the treatment properly adapted to the disease. The rest is in the hands of a superior being; to whose will it becomes us to resign ourselves with cheerfulness and resignation.

Nothing more then remains, than to have these observations confirmed by more numerous trials; and should those effects, which have

been uniform in my own experience, prove universal, nothing more of consequence will remain to be done, or to be desired in this disease. Numerous cases of those, who are at present afflicted, must be too far advanced to admit of any essential benefit. But general causes acting uniformly, every month will produce new subjects. Now that they have all the facts regarding this mode of treatment fairly before them, and the inferences which seem duly to follow from them, it cannot, I am persuaded, be long before the truth shall be duly established, and generally received. I cannot but feel a full conviction, that, ultimately, this dreadful malady, the scourge and terror of the female sex, will be converted into a blessing to society, by affording in every quarter of the globe, ocular demonstration of the injurious and fatal tendencies of customs, which are universal, and universally deemed innocent, or salubrious.

A very few words only remain to be said on the nature of Cancer, which I subjoin, because what appears to be true with regard to this external disease, may, I think, readily be transferred to many of those, the seat of which

is in the internal parts of the body. The little I have to offer is rather of a negative than of a positive nature.

1st. The essential foundation of the disease seems not to consist in any peculiar action of the parts, but in a simple affection of the fibre, which exists previous to any change in the structure of the parts. This affection not being cognisable to the senses, but discoverable only by the subsequent changes of structure, must be deemed the immediate cause of all the subsequent symptoms. To define its nature precisely seems impossible, since every just definition of a disease is but an enumeration of external signs. It may however be conceived to be nothing more than a certain diminution of the vital powers of the parts, which is not in so great a degree that they must mortify, but which is enough to prevent them from preserving a healthy organization, or being equal to the processes of restoration.

2d. This change being produced by causes operating on the whole system, is not confined to parts of a peculiar structure; as glandular parts, for example. There seems to be no

part of the body exempt from it, and it were easy to collect from writers, examples of its affecting almost every part of the body. If the mammary glands of females, and the *testes* of men are more frequently affected, it is not because their structure is glandular, or complicated; but those are parts superadded to the body for a peculiar purpose, and their vital powers are less than that of the other parts of the system.

3d. There is no specific poison produced in a part affected with cancer, which possesses a power of contaminating the contiguous sound parts.*

4th. That in the series of actions, which, taking place subsequently to the morbid condition of the simple fibre, constitute the cancerous disease, there is likewise nothing peculiar or specific.

It is highly probable that the condition of

* When therefore I have said that parts are *contaminated*, I mean simply to express, that they have undergone the change, which is followed by the cancerous diseased action, without presuming any thing with regard to the cause of this change.

the fibre which lays the foundation of Cancer, has existed in an inferior degree, even for years before the changes which form the proper symptoms of Cancer. I have related two examples of the female breast, which were apparently sound, having been removed by absorption, whilst the patients were under the course of distilled water. In each of these, the other breasts being cancerous, it was quite plain that the second were diseased likewise, though the actions of disease had not commenced. In these cases a blow or accident might have been the immediate cause of the commencement of the Cancer. And this consideration will explain the great depth to which this disease penetrates, apparently in a very short time, without having recourse to any supposed power of contamination; the existence of which is incompatible with the results of my experiments. MORGAGNI has recorded a striking example of this fact, very explicable upon the supposition I have made, and hardly upon any other.

A rustic woman, he says,* aged about fifty,

* MORGAGNI Epistol. Anatom. lib. iv. epist. 1. art. 48.

received a blow upon her left breast; after a month a tumour was discovered, which after six months more, had greatly increased; it was thick, hard, and irregular; the nipple was hid under transverse wrinkles; the pains were frequent and violent, and the arm œdematous. At this period the diseased parts were removed by excision. After a few days the ulcer grew dry, and discharged only a small quantity of fetid ichor: the cartilage of the fourth rib was discovered in the ulcer, of a black colour, and in a manner disjoined from the sternum; the whole body became œdematous, and of course death followed in a few days after the operation.

A case very nearly similar to this is related by Mr. Home, in which, after the extirpation of a scirrhous tumour of the breast, "the "disease was found to have extended itself to "the ribs and muscles of the chest."*

In these examples there is every sign, not of the disease having been propagated from the scirrhus to the parts below; but of these

* Home on Cancer, page 63.

latter having been simultaneously affected with the glandular parts above; though there might be some difference in the time, in which the obvious and sensible diseased actions might begin. These facts demonstrate, moreover, the difficulty, and perhaps, the utter impossibility of arresting the progress of Cancer, in some cases, even in an incipient stage. The disease, even at its first appearance, will have penetrated into the vital parts. We have seen this completely illustrated in the circumstances of the second case which I have related;—that of the aged woman in St. Andrew's Workhouse. There could not have been a particle of new disease generated after July 13th, 1805: but sloughs separated from under the clavicle, and even from the parts contiguous to the larynx, two complete years afterwards; all these parts had been apparently quite sound at the time she entered upon her regimen.

The same principle may be extended to other diseases: it seems probable, that there is every variety of the degree, in which the vital powers of parts is destroyed, previous to the commencement of diseased action; and that

the phenomena of the disease depend chiefly upon the degree of this destruction. The extreme degree is that which lays the foundation of mortification. The pain, inflammation and tumefaction are symptoms preceding the complete death of the parts; but it cannot be conceived that the powers of the parts are not very nearly destroyed, before there is any local change or alteration of texture whatever. Upon no other principle can a fact of common occurrence be explained; I mean where a very slight injury induces mortification.

The condition of the fibre seems very nearly similar, previous to the formation of the common abscess; the parts involved in the abscess completely perish, and are removed from the system. But in the abscess, the base and surrounding parts are commonly healthy; the disease is therefore local; and the only danger is from its magnitude, or its situation. If life is not destroyed from these causes, as the vital powers are perfect, the parts destroyed may be reproduced. If, however, the basis be unsound, the abscess or ulcer can never heal; and it may form a disease, which may

prove fatal, more speedily than the most malignant case of Cancer.

The Cancer therefore, though the most intractable of chronic tumours and ulcers, is not that, in which the vitality of the parts involved in the disease is the most completely destroyed. The powers of the part are so much impaired, that they can neither preserve the actions of health, nor are equal to the processes of restoration; and as it is necessarily progressive, by the constant and unremitting operation of its remote causes, it must arrive at a depth and magnitude, which is incompatible with life. But besides this, the whole system is at the same time yielding to forces, the influence of which continue, for a long time after the entrance of fresh noxious matter into the body has been prohibited. Under this combination of circumstances, it can be no surprise, if very advanced cases, at all ages; and those even of a more favourable aspect, in the later stages of life, should still prove fatal, though the disease have been made strictly local, and though not a single particle of new cancerous matter have been generated.

A single remark, though not strictly connected with the present subject, I cannot withhold. It is this;—as large parts of the system can have their vital powers greatly impaired, even for years before there is any visible organic derangement; as this can be carried to so high a degree, that a small injury can produce gangrene in a part, which is apparently sound; it creates no surprize, that the whole system can perish, though no obvious local disease can be discovered by anatomical investigation. The system may perish, before local diseased action has begun. And such may often be the cause of epileptic convulsions, and other vehement affections of the sensorium; in which, to point out the source of irritation from the symptoms may be an absolute impossibility. In cases, moreover, of vehement local affection, as in the inflammations of the vital organs, which prove speedily fatal; I think it evident that the real injury, the destruction, or great diminution of the vital powers of the part, precedes the attack, often by months, or even by a year or two. The inflammation, to which death is commonly ascribed, is but a consequence of the injury previously inflicted upon the organ; and is probably an effort of

the constitution to restore the part to its original integrity.

As there is nothing peculiar or specific in the causes exciting Cancer; so is there nothing peculiar or specific, either in the induration, or in the subsequent ulceration. It has been observed by Mr. PEARSON, that hardness and insensibility, tumour, discolouration of the skin, inequality of figure, lancinating pain, a varicose state of the veins, and œdema of the contiguous parts, are not certain criterions of a malignant scirrhus.* And with equal truth it may be observed, that there is nothing specific or peculiar in the cancerous ulcer. A cancerous sore is nothing more than a foul and ill-conditioned sore. All the changes, which it undergoes, are the consequences of common processes; as common sloughing, common ulceration, and, occasionally, common granulation. Every species of ulceration, from the slight superficial sore to the deep fungating ulcer, may be found connected with, and forming a part of an exten-

* PEARSON's Practical Observations, &c. p. 6. et sequentia.

sive ulcerated Cancer. To have a fungating base appears to indicate the most inveterate species of the disease. But there are ulcers of this description, which have healed under the operation of medicine, or, perhaps, spontaneously. This circumstance has occasioned errors in judgment, and conferred an ill-merited reputation both on medicines, and on surgical operations. The following is a striking example of this nature. The history is given us by TURNER. *

" An elderly man had complained for some
" months past of a cancerous callus upon his
" lip, appearing first like a wart, soon after
" growing painful, fretting, and spreading
" farther, which gave him great uneasiness.
" Besides the callous painful ulcer, with the
" *little colly-flower protuberances* overspread-
" ing great part of the lower lip, the maligni-
" ty had seized upon the whole mandible on
" that side, stretching down the neck; the
" glands and muscular parts whereof were
" indurated in like manner, together with the
" back part of the fauces; from whence, as

* TURNER's Art of Surgery, vol. i. p. 94. 4th Ed.

" well as from the lip itself, there was per-
" petually draining off a vast quantity of a
" stinking gleet, being mixed sometimes with
" blood issuing from the lip; the jaw so tied
" down, that he could not, but with difficulty
" open his mouth, nor form the muscles of
" the œsophagus for their office of deglutи-
" tion, so that there seemed great danger of
" his perishing through want of sustenance
" to be conveyed into the stomach. The
" maxillary glands, as well as the sublingual,
" felt like so many little pebbles; the same
" unequal and painful hardness extending
" itself quite down to the clavicle." The author proceeds to inform us, that himself and another surgeon pronounced the disease to be truly cancerous; and that all that could be done (it was to be feared) would only palliate. But notwithstanding this unfavourable prognostic, the event proved them to be mistaken. In little more than a fornight, (after the use of some slight remedies and a saturnine lotion) the induration sensibly lessened, the knotty glands seemed to resolve, and the discharge was greatly diminished. And in less than three months, " the callous edges of the ul-
" cer resolved, as did likewise the induration

" of his chaps and neck, the ulcer soon after " contracting, softening throughout, and firm- " ly cicatrizing, as yet remains, after several " years past."

After reading this history (which is by no means singular) we cannot hesitate to agree with RICHTER, and others, who assert, " that " there is no pathognomic sign of an open " Cancer." * The common pimple and the deep ulcerated Cancer have one origin. The deranged, and commonly increased activity of the vessels, which gives rise to tumours and other diseased structures, must be subsequent to some defect in the powers of the part, in which the changes take place. This must be the foundation, on which the edifice of diseased structure is built. From the common pimple to the deep ulcerated Cancer, ulcerations will be found of infinite diversity in form and species, but which run into one another by nice and almost imperceptible gradations. This circumstance is enough to render it probable, that the difference, which is observed, both in the external character, and in the final issue of these ulcerations, arise not from any specific

* PEARSON'S Observations, p. 79

difference in their causes, but from differences in the subjects, on which they operate. The mild scirrhus denotes commonly a sound subject. When the constitution begins to sink, it degenerates into the malignant Cancer; and the disease, from being local, becomes constitutional. Fatality is included in the very idea and definition of Cancer. But so little is there of peculiarity in the characteristic marks of the local affection, that whether an individual instance of disease ought to be designated by the name of Cancer or not, can often be determined only by the event.

The cancerous ulcer then being no more than the most malignant and intractable of common ulcers, produced by the operation of common causes, and wholly independent of specific virus, it may be expected that the regimen, which produces so remarkable a change in its habitudes, would act still more speedily and efficaciously on other ulcerations of a milder nature. But diseases of this nature being almost exclusively in the hands of surgeons, I have hitherto been hardly able to make any but fortuitous observations on this subject. I have observed that cutaneous foulnesses, habitual discolourations, as of the nose and chin,

and pimply eruptions, disappear under this regimen; but it requires to be pursued steadily three or four years, (in those, at least, who are not young) before this happens. A very well marked example will be presently given of its utility in a habitual ulcerated condition of the lower jaw, which would probably have terminated in an exfoliation of the bone, for the greater part of its length. And even during the time that these sheets have been in the press, I have experienced its power in bringing the scrophulous ulcer to a state of cicatrisation, with an ease and expedition, which has given great surprize even to myself. I shall therefore briefly relate the circumstances; since, the patient being in a public workhouse, it is in the power of any one to ascertain the correctness of the account.

CASE X.

JOHN MILNER, aged 11, has been received for some years into the workhouse of the parish of St. Andrews, Holborn, situated in Little Grays'-Inn Lane. He has had a scrophulous disorder almost from his infancy, but for the last four years he has been a deplorable spectacle. One of his sisters had died of the same complaint this autumn, and others of his family are, I understand, similarly afflicted. This poor lad had, by the humanity of the governors of the workhouse, been admitted into St. Bartholemew's hospital; he had been sent to the sea, and had also for nine months been confined to a milk and vegetable diet; but the disease did not yield to any thing attempted for his relief.

The disorder is seated principally about the face and neck. The left cheek is greatly swelled, and covered with hard and elevated scabs

for a small distance round the scabs the contiguous skin is inflamed: the right cheek has some of the same scabs, but it is not so much tumefied as the left. The left ear is also greatly swelled, and there is a painful running sore in the angle between the ear and the head. The mouth is much deformed and drawn awry by the irregular swelling of the under lip; and mastication is painful and difficult, from the soreness of the angles of the mouth. But there is still more thickening under the chin, where the parts are so uniformly tense, that it is impossible to determine its precise nature. The redn ess extends at one part to the sternum; and immediately above the sternum there is a very painful ulceration. There is another ulcer of greater extent, and very painful, upon the right arm. Its size is nearly equal to a crown-piece. These had both broken out recently upon the approach of the cold of winter. The whole skin is rough and full of pimples.

Except this local disease, the boy* appears

* The appearance of this boy much resembles the drawing exhibited in the print-shops of the *ox-faced boy*, whose

strong, well nourished, and in good health.

October 19, 1808. Such was the state of this boy on this day, on which he began the use of distilled water. He had been confined a second time for about three weeks to the use of milk and vegetables, by the order of Mr. TAYLOR, apothecary to the house. It was directed that this diet should be continued.

October 27. The inflammation of the skin surrounding the scabs has faded away.* The pain of the ulcerations has diminished.

November 3d. The ulcer above the sternum has cicatrised.

disease was ascribed by the late *honest* Dr. ROWLEY to vaccine inoculation.

I see, certainly with some feeling of indignation, but with none of surprise, that this species of imposture is renewed in a late number of a calumnious monthly publication, which is an habitual outrage upon decency and good manners. But I hope that, at length, the public is too much enlightened to pay any regard to such contemptible fooleries.

* I have now observed this appearance taking place immediately on using distilled water, at least twenty times.

November 10. There has been a great discharge from the arm, and the ulcer is very painful.

November 17. The pain of the ulcer is diminished.

November 24. Many of the scabs have fallen off the left cheek. The discharge from the arm is diminished, and the part seems disposed to heal. Much sordes has come out of the ear.

November 31. The ulcer on the arm has ceased to discharge.

December 7. The ulcer on the arm has cicatrised. The discharge from behind the ear has also ceased.

December 19. The far greater part of the scabs have fallen off. The tumefaction of the face is nearly gone.

We see then that the scrophulous ulcer is prevented from cicatrising merely by the constant irritation of common water: remove this

irritation, and the processes of health, that is to say, the natural action of parts, which have suffered a breach of continuity, instantaneously supervene.

An ulcerated surface is by far the most fit instrument, by which to measure the effect of minute irritations on the body. It may be compared to the most delicate electrometer. The nerves being bare, they are exquisitely sensible; and therefore the sufferer perceives changes in this part from causes which would otherwise elude his perceptions, and therefore be wholly unnoticed. To those who wish to arrive at a speedy conviction of the truth or falsehood of the principles, I have attempted to establish, I recommend the first trials to be made in cases of ulceration. The change in the sensations will very quickly satisfy the subjects themselves; and the aspect of the parts will almost as speedily produce a similar conviction in the minds of the spectator.

Facts as striking as that which I have just related, though indeed not so immediately under ocular observation, impressed me with the conviction, that all our diseases are arti-

ficial and curable. Nor is this confidence diminished, if the cases are not very much advanced. But the longer they are permitted to continue, the greater are the difficulties they present. They become a part of the habit: the sensorium, and through its medium, every fibre of the frame participates in the affection. Nor can any cure be effected, but by a complete and radical change being produced in the whole constitution; a change to be effected only by the most pertinacious and determined perseverance.

In what then does this change consist? It must be, I am persuaded, in the nature of the blood, and, in consequence, of all the secretions, and of the composition of the whole body. It seems, that organized matter of every description (provided its texture be not too hard) is soluble in the juices of the stomach; is convertible into chyle, and into blood. And this power the digestive organs of man possess, in common with those of many other tribes of animals. But under one species of matter the body may be preserved in health; under another, it becomes diseased, and perishes prematurely. The chyle, the blood, the secretions, and the

composition of the solids, formed from one species of matter are suitable to the original nature of man,—suitable to his sensorium, which is perpetually impressed by them,—suitable to the relation, in which he has been placed by his maker, to the other orders of created beings. The other species of matter being noxious, and deadly, is therefore unnatural; its use has inflicted innumerable evils on all the animated beings, with which man is connected: but they have been amply avenged upon himself; to himself he has proved the most mortal foe; every wound which he has given to the unoffending brute, he has, in truth, struck into his own vitals.

It is in vain that I hear it objected, that chemistry can detect no difference between the blood of the herbivorous and the carnivorous animal. Be it so;—your chemistry then is imperfect. Some centuries more may elapse, before you arrive at a just analysis of vegetable and animal matter; and before you can ascertain the difference between blood, or bone, or muscle, formed from vegetable, and from animal food. It may be no more than a slight variation of the proportions. Alcohol and

sugar are composed of the same elements. I shall not believe, on that account, that the former is wholesome nutriment, and the latter a deadly poison.

If this view of the subject be correct,—if to eradicate a constitutional disease, it be necessary to change the composition of the body, it is but natural to expect that this can be only done very slowly and gradually. By the regimen, which I have adopted, nothing more is effected, than to prohibit the introduction of new morbific matter. That which is already present continues to act with a force that is for some time permanent, or even apparently accumulating. Though its absolute force must necessarily be every day diminishing, its relative force to the resisting powers of the system may be increasing. If, therefore, the powers of the system are yielding, they will continue to yield, though more slowly. Even if the powers of the system be firm, still the effects may accumulate for a time. The force continues to act, though with increments that are decreasing. The disease then may increase for a time, as the heat of the atmosphere con-

tinues to increase, after the sun has passed the summer solstice.

This is not a mere abstract or metaphysical speculation. I have observed, in practice, very severe symptoms, obviously the consequence of animal food, twelve months after adopting a vegetable regimen. I have seen a most severe inflammatory disease, when the same regimen had been strictly followed two years, and the distilled water three more, and though the regimen had done the most essential service in a habitual complaint, (a gouty affection of the head) for which it had been adopted. I cannot pretend to speak from an extensive experience; but my opinion is, that no case, which is curable, can resist the effect of this regimen, if persevered in steadily for three complete years; at the same time that one year, or a year and half, will commonly afford much relief.

If I have dealt little in the relation of cures, it is, because my principal object, in whatever I have laid before the public, has been to give a faithful relation of effects, and to deduce

from them their legitimate consequences. To supply this defect, (for so it will be deemed, even by many who ought to be better informed) before I conclude, I will give an account of one case, in which the success has been complete. It will evince, (what is indeed exceedingly obvious) that the principles I have attempted to establish are general, and universally applicable to chronic diseases, however different be their seat, symptoms, and character. I will give the relation in the words of the patient; a gentleman, whose zeal in favour of the truth has been most active and unremitting, and to whose benevolence the hope of contributing towards the diffusion of knowledge and happiness, and towards the diminution of the mass of human suffering, is the highest gratification that can be proposed.

CASE XI.

DEAR SIR,

HAVING benefited very essentially by the adoption of the regimen you recommend, in an asthma, with which I had been afflicted from an early age, I cannot resist the opportunity you give me of stating to the public some particulars of my case, by which, it will be seen, how far I am indebted to you for the health I now enjoy. Before I quitted the West Indies, I had experienced, when only seven years old, my first attack of asthma. I soon after came to England, and suffered little from that painful disease until I went to Christ Church College in 1786, where I had it, in the night, at least, almost constantly upon me. From that period I was exposed to paroxysms

of asthma during the lapse of many years, mitigated neither by the cold of North America, nor the heat of the torrid zone. The attacks continued from one week to three, during which I could not lie down in my bed, but was obliged, night after night, to rest inclined upon a table. I was not without considerable intervals of ease, and have occasionally had a respite of some months; though it very seldom extended beyond three; and even when well, I had a constant uneasiness at the breast upon inspiration, and I perceived altogether that the disorder was gaining ground, both in the length and severity of the paroxysms. But never, perhaps, had I suffered from this complaint more intensely, than at the time when your relation, Dr. BLOUNT, of Hereford, recommended to me a trial of distilled water, three years and a half ago.

I derived immediate benefit from its use, and by persevering in it (as I have done ever since) I became so free from my habitual complaint, that I felt an entire confidence, that nothing more was necessary to the complete establishment of my health.

This confidence was only shaken by the repeated assurances received from yourself, that ultimately I should find the benefit imperfect, without the adoption of a vegetable regimen. At length, therefore, about a twelvemonth ago, I resolved to comply strictly with this advice. I had attempted it partially some months before, at which time I experienced a sense of weakness, and a return of asthmatic symptoms; but from the second attempt I have not experienced any inconvenience; and I now find that I have taken leave of my asthma entirely, and have every reason to believe, that in my instance, at least, a cure of this hitherto incurable and most afflicting disease has been effected. What I now sometimes experience, instead of my former asthma, is merely a mucous secretion from the lungs, unattended by any difficulty of respiration. From the vegetable regimen, I have experienced neither weakness nor loss of flesh, but rather an increase of strength, and more fulness of habit.

For about eight or nine years before I adopted your regimen, I had remarked the

gradual thickening of one of my jaws, through the whole length of it. This was followed by suppuration in a certain portion of the gum, which symptom wholly disappeared, before I had substituted pure for common water eight months. To your discovery in dietetic medicine I therefore hold myself indebted for health; a blessing which I had sought elsewhere so long, and so much in vain.

The authority of your opinion has farther induced me to adopt this mode of living in my family, and I believe, no children can possibly be healthier than mine.* I think it may be useful to add, that, in common with most invalids, I expected relief from increase of clothing, and had worn flannel next the skin for fifteen years, during winter and summer. On the diet you prescribe, I have been enabled entirely to throw it off. These, which I have detailed, are not the only reasons that lead me to express my fullest conviction of the efficacy of your system of treatment in chronic cases.

* This is the family to which I referred at page 18 of this work.

Of the beneficial effects which might ensue from the general adoption of vegetable diet, it is not for me to speak; I will only observe, that I am at a loss to conceive why it should be difficult to acknowledge, that MAN was not intended by nature for MURDER.

Believe me always,

&c. &c. &c.

JOHN FRANK NEWTON.

Chester-street, Grosvenor-place,
December 2, 1808.

I have seen another instance of asthma, in which the relief obtained by the adoption of this regimen was as striking and as speedy, as in that which has been just related. But in a third, nine complete months have elapsed without the smallest apparent alleviation of the symptoms. I should add, however, that no inconvenience, nor the slightest weakness have been experienced from it.

These disappointments, joined to the general prejudice in favour of the supposed strengthening powers of animal food, (a prejudice stronger in the minds of Englishmen, than in

those of any other nation) will very long retard the regular adoption of this regimen in internal chronic diseases. This renders it the more desirable to accumulate the evidences of its efficacy, in those that are external. The cure of scrophula includes, by the common consent of medical writers, the prevention of consumption, and of a tribe of internal glandular disorders. In the phenomena of Cancer we are presented, on the surface of the body, with the slow and perfect destruction of an external part, from the operation of foreign causes. Dissections have shown that every internal organ, and indeed every fibre of the body is subject to similar ravages. It may be proved too, from the records of the disease, that almost all the great and incurable diseases, as mania, epilepsy, spasms and contractions of the limbs, dropsical swellings, asthmatic breathing, and consumption, have been connected with Cancer, either as alternating with it, being concomitant, or immediately succeeding it. In stopping the progress of Cancer, it may be said that we bring, immediately under the very eye, the causes of all chronic diseases.

Certainly no picture can be more afflicting,

than that which is habitually presented by human society. The physical evils are enormous; the moral are more frightful still; nor can any thing make men submit to them with cheerfulness, but habit, and a deep and radical conviction, that they are absolutely inevitable. Let us, however, entertain better ideas of the beneficence of the Creator; let us believe, that in presenting us with life, it was the design of Providence to present us with the most invaluable blessing. Let us suspect that our misery proceeds from ourselves; whilst we acknowledge, with reverence and gratitude, that our happiness is the immediate boon of the great Author of our Nature.

APPENDIX.

AS the contents of the preceding sheets are, in truth, supplementary to my "Inquiry into "the Origin, Symptoms, and Cure of Consti-"tutional Diseases," I may take this opportunity of correcting a chemical error or two, into which I have fallen, in relating the experiments, which will be found at the end of that work.

1st. I have said, (Experiments, III.) that the sublimate obtained by heating arseniate of manganese with charcoal is not arsenic. My reasons for this assertion were these; 1st. There is no arsenical odour in this process, but simply that of carbonated hydrogen. 2d. It seemed less volatile than common arsenic. 3d. By slow oxidation in the at-

mosphere it was gradually changed into an ash-coloured oxide, whereas the oxide of arsenic formed in the same manner is black. 4th. There was not a particle of the arsenious acid (white arsenic) produced, though the process was performed in an open tube, of large diameter; whereas, when common arsenic is sublimed in the same way, much arsenious acid is produced; it adheres to the tube, and covers the internal surface of the regulus. 5th. Conformably with this, if arseniate of iron be heated with charcoal, in the open air, it emits a copious white fume of arsenious acid: if arseniate of manganese be treated in the same way, apparently, nothing escapes from the compound.

Still it will be found, that this metallic sublimate heated with nitric acid is converted into an acid, which proves to be the arsénic acid; and it being also volatile, in these respects, the sublimate appears to be a true arsenic. The following experiments will, I believe, clear up the difficulty.

(A.) Some of the sublimate from arseniate of manganese was put into a Florence flask, coat-

ed, and unstopped; and the flask was put on a fire. The sublimate rose into the superior part of the flask, apparently unaltered, nor were any traces of arsenious acid to be observed.

(B.) Some well reduced arsenic was treated in the same way. A large quantity of arsenious acid was sublimed: a small quantity of regulus was found remaining at the bottom of the flask.

(C.) The residuary regulus was again treated in the same way, with a heat somewhat stronger. It arose into the neck of the flask, apparently unaltered, nor were any traces of arsenious acid to be observed.

The sublimates (A.) and (C.) then seem to be the same. And I have reason to believe, that the sublimate from arseniate of manganese is arsenic united to manganese and iron; but in which the union is such, that the other metals cannot be separated either by heat, by alkaline precipitants, (after the arsenic has been acidified) nor by prussiate of potash.

I may add, that the nature of this sublimate is quite unimportant to the reasoning connected with the experiments; the object of which was to show, that a quantity of arsenic was contained in the residuary manganese, which was evident in several phenomena, but which could not be separated by common processes. This was the reason why I examined the sublimate so superficially.

II. It is said, (xiv.) that "in the bulb of "the tube was found a substance (C) which "seemed to have undergone fusion, light, "and of a shining metallic appearance." This I find to be erroneous. There is only found a powder mixed with a deliquescent salt in the bulb of the tube.

FINIS.

ERRATA.

p. 45, l. 17, for schirrous *read* scirrhous.
p. 73, l. 20, for welled — swelled.
p. 32, l. 14, for gland — glans.

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