The morbid anatomy of the stomach, bowels, and liver ... with ... a summary of the symptoms of the acute and chronic infections of the above-named organs / [John Armstrong].

Contributors

Armstrong, John, 1784-1829.

Publication/Creation

London : Baldwin & Cradock, [1838]

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TO

FRANCIS BOOTT, M.D.

LECTURER ON MATERIA MEDICA AND BOTANY,

AS A TOKEN OF

THE SINCERE REGARD OF HIS FRIEND,

THE AUTHOR.

PREFACE.

SEVERAL causes have concurred to retard the progress of Morbid Anatomy in England, but two appear more prominent and powerful than the rest—prejudice on the part of the public, and something very like indifference on the part of the profession. It would be easy to account for the public prejudice, on those inherent principles of our nature, which lead us to regard as inviolate the relics with which so many endearing recollections of life are associated. Yet it would be difficult to assign any very satisfactory reason for the professional indifference, once so extensively diffused, unless it owed its origin to that scholastic system of education, which directed the mind to nosological technicalities and metaphysical abstractions, rather than to the particular details and general inductions of pathological anatomy. Happily, however, this indifference is giving way to a wide-spreading zeal among the profession; and, it is to be hoped, that the advancement of knowledge will daily diminish the aversion to dissections in the public mind.

Every medical man, who is duly impressed with the practical importance of his art, now considers it a duty to cultivate Morbid Anatomy to the utmost of his power, since he is fully sensible that, without the aids which it affords, theory is mere conjecture, and practice mere empiricism. Indeed, if a doubt exist in his mind as to the cause of death in any case, he would look upon himself as criminal, were he not to request and urge an examination on the ground that, as such a case was the representative of others which must afterwards fall under his care, so they, in like manner, would, in all probability, be fatal, unless the veil of ignorance should be removed by some particular dissection. And, on the other hand, when such a request is made, with becoming delicacy to surviving relations or friends, they should remember that they are under certain social obligations, which are of a serious and even sacred character. If their feelings should be so exclusive as to prevent the medical attendant from making an examination when he is at a loss to determine the nature of the disease, they occasion to some of their fellow-creatures, through his consequent ignorance, an affliction as deep and irrevocable as their own; and thus, while they violate their duty as members of society, they moreover preclude the practitioner from acquiring a clear insight into those hereditary tendencies, which, in a preventive view, might enable him to be really useful to themselves, as branches of the same stock. More than half the evils in the world arise from the predominance of the selfish over the social feelings; but, if knowledge and virtue should advance together, mankind will be more under the influence of that general principle of sympathy which inculcates a constant attention to the welfare of the community. At least, it is imperative upon the medical philosopher to be guided by this principle, that he may, on all proper occasions, endeavour to instruct himself, and overcome those prejudices by which the advancement of pathological anatomy has been so much retarded in this country, compared to some parts of the continent, where so laudable an example has been set by many of our foreign brethren. It must not, however, be inferred, from the tenor of such remarks, that any importance is attached by me to the present attempt, which is put forth, with great deference, not as an elaborate production, but as an imperfect offering of good will, under the expectation that it may stimulate others to exertion. In truth, these Illustrations were originally designed to accompany a Work, which I have long been preparing, on the Remote Occasions, Prevention, Pathology, and Treatment of Affections of the Stomach, Bowels, and Liver, as they occur in Children and Adults. But, as nothing of this nature could be made useful, without great and deliberate labour, my duties as a lecturer and practitioner have not allowed me sufficient leisure for its completion this winter ; and, therefore, it was deemed best to publish these Illustrations first, and an account of the Symptoms in connexion with the morbid conditions, on a plan somewhat similar to that pursued by the late excellent Dr. Baillie. In the projected Work, which will follow these Illustrations, it is intended alike to avoid vague generalities and useless minutiæ, by a careful selection of particulars on the one hand, and a deliberate inference of principles on the other, so as to prevent that bulkiness of detail and reasoning, which is so apt to obscure the subject and confuse the reader. One of the most distinguished ancients, in writing to his son, notices that he had not time to shorten his letters; and most large books might be reduced to small ones by that laborious but useful process of the mind, which selects, arranges, and exhibits, in lucid order, those things which are the most constant in nature, or the most important in science and art.

It is not my design to give delineations of all the morbid appearances connected with the Stomach, Bowels, and Liver, but to choose those which are of the greatest consequence, and which have been attentively examined by my own eyes and hands ; and guided by the same principle of personal research, the summary of annexed symptoms will be drawn from my own observations at the bed side of the sick. If this work should meet with the approbation of my professional brethren, I may extend similar Delineations and Explanations, with correspondent Essays on the Pathology and Treatment, to all the viscera of the human body, and publish them under as cheap a form as possible, for the sake of public utility. But, if they should fail to excite a general interest, I shall console myself with the hope, that some more competent person will undertake the task, and meet with the most deserved and perfect success; for, no doubt, many such individuals exist in this country, who only require the force of circumstance and determination to display their superior attainments in Pathological Anatomy. As followers of a philanthropic profession, it is surely both a duty and a pleasure, on every brief opportunity, to withdraw from the contention and turmoil of active life, and deeply reflect whether we cannot, in the peace and privacy of the study, abstract something from past experience, that may be extended, beyond the narrow round of daily business, to the benefit of all mankind. What each individual might add in this way may be of very trifling amount, yet, if the contributions were general, the sum of knowledge would be greatly augmented; as the conflux of many small streams at last makes up the large river, by which whole districts are fertilized and refreshed. Influenced by feelings of this cast, I determined to give to the profession the results of my own observations from time to time, provided they should be deemed useful; and, being assured that public opinion always judges correctly, my literary labours will proceed or cease according to the character of its impartial decisions.

Russell Square,
January 1st, 1828.

PRELIMINARY REMARKS

ON

MORBID ANATOMY.

Morbid Anatomy occupies, in detail, so many volumes, that it seems a very complicated subject; yet, if we were to reduce the known particulars to general principles or ultimate facts, we should find, that it lies within a much narrower compass than appeared at first sight. For instance, if we take the acknowledged products of Inflammation, as seated in this or that texture, and to them add Tubercle, Scirrhus, Fungus, and Melanosis, we have at once a bird's-eye view of the most important changes which occur in the solids. But it is self-evident that any illustration of Morbid Anatomy which is confined to the solids merely must be defective; for in the products of Inflammation, and even in the above-mentioned Formations not legitimately referrible, perhaps, to that state, the fluids are so directly or indirectly concerned, that we should endeavour to estimate their influences or conditions. In these Preliminary Remarks, therefore, a brief exhibition of some of the most striking points, connected with the pathology both of the solids and fluids, may tend not only to elucidate the subsequent parts of the work, but to prevent repetitions.

In the human body we have for consideration the blood, many pieces of mechanism through which it circulates, and, demonstrably, from the experiments of Le Gallois and Philip, something analogous to the galvanic or electric matter. All these are apparently combined in the elaboration of the various secretions of health, and any considerable alteration or irregularity in the blood, or in the mechanism of parts, may lead to a morbid result, while some experiments of Bellingeri have shown, that the electricity of the blood and of the secretions varies in disease. For several years past, I have, in my Lectures, called the attention of my class to certain changes which relate more immediately to the blood, both in Specific and Common Affections, and some of those changes shall now be briefly noticed.

If, for the purpose of investigation, we make an attempt to approach the fountain of life—the blood—we cannot fail to perceive that changes take place in its quantity, velocity, momentum, distribution, quality, and secretions, and that one or other of these are concerned in the character and course of many acute or chronic affections. In regard to the quantity of blood, it may be either excessive or deficient, compared to the healthy amount in the individual. General Plethora most frequently arises from a want of due relation between the *ingesta* and the *egesta*, the former remaining the same or being increased, while the latter are lessened, so that an overplus of blood is the inevitable consequence. We often meet with cases of this description, after middle age, in persons who have retired from an active to an inert mode of life. The appetite is largely indulged, and the exercise but little, in reference to former and long established habits. The sum of the excretions and secretions is diminished, the pulse becomes quicker and fuller, or flagging and oppressed; and unless blood be opportunely abstracted, purgatives administered, or the quantity of aliment reduced, this *otium cum dignitate* of the sensual and sedentary dreamer of enjoyment winds up in apoplexy, palsy, or some other disease of repletion. We have an example of a deficiency of blood from copious venesection, or spontaneous hemorrhage, and sometimes it is the consequence of too scanty a diet, and at other times proceeds from organic disease, particularly when seated extensively in the glands of the mesentery. Sudden and excessive loss of blood occasionally leads to a fatal syncope, but it is more frequently followed by what might be denominated hemorrhagic re-action, in which a rapid circulation remains, with diminished general power, very liable to produce slow inflammations in weak parts, and to lead to serous effusions; while the deficiency of blood attendant on chronic organic affections is always accompanied by a depraved condition of the solids, but especially of the surface, often more marked than in cases arising from sudden and considerable losses of blood.

The whole quantity of blood may remain natural, and yet disorders proceed from irregularities in its distribution. Augmented velocity and momentum of this fluid, if maintained for some time, are very apt to surcharge the capillary arteries and veins of those textures which are predisposed by some latent weakness,* producing

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* The subject of Predisposition is one of extreme interest. It shall be fully proved, that the tendency to disorder admits of four sub-divisions; namely, that it is hereditary, ætal, sexual, or acquired.

either Increased Determination of the part, or actual Inflammation, as may be inferred from their appearance in the progress of febrile cases. If it be asked in what these states differ, it may be summarily answered for the present, that in Increased Determination, there are neither the combined symptoms nor the combined products of Inflammation, as shall afterwards be shown. On the other hand, diminished velocity is liable to disturb that beautiful equilibrium, which exists between the venous and arterial sides of the circulation, especially under any great shock, which at the same time lessens the animal heat upon the surface of the body, and sinks the force of the heart's action far below the natural standard. On such occasions, we have the circumstantial evidence of the symptoms, that there is a deficiency of blood in the arterial system, and a correspondent over-accumulation in the venous system; but the correctness of this statement is confirmed by the positive evidence of dissection, for when such instances prove fatal, venous congestion is always found in that organ, the functions of which had been previously the most disturbed. Unless, indeed, the appearances of congestion had been lessened or removed by a copious effusion of a mucous or serous fluid; and it is well known that an abundant secretion will in like manner affect the degree of injection of an acute inflammation of short continuance. In many instances, therefore, we may be said to have a Local Plethora in the arteries or veins separately, or in both simultaneously; and this doctrine is as applicable to chronic as acute affections, as will be more particularly explained in another place.

With respect to the quality of the blood, it differs in different persons, and even in the same person under different circumstances; an assertion the truth of which might be proved by a reference to the influence of certain diets and diseases. General Plethora mostly takes place in strong individuals who have a firm fibre, or in plump lax persons. But in both cases we find a superabundance of the red portion of the blood, the crassamentum on cooling usually being much firmer in those who have dense muscles. In a recent case of this kind, where the pulse was large, round, and resisting, and where the patient was palpably threatened by apoplexy, the blood drawn did not separate half the common proportion of serum, so excessive was that of the cruor. When Local Plethora exists upon the mucous textures of pale thin men, relaxed by sedentary habits and a spare slop diet, there is, on the contrary, often a deficiency of the red particles compared to the serum, and at the same time the quantity of fibrine and albumen is frequently lessened. A similar effect, it is well known, is produced by copious and repeated blood-letting, the blood becoming thinner and thinner, and the skin paler and more flabby than natural. Indeed, the blood is brought into a like condition by protracted disorder, especially where the digestive processes are disturbed, as in cases of chlorosis, in some of which I have known the blood to flow from the punctured vein like so much thin claret or very pale red ink, scarcely tinging the linen upon which it fell. These two states of blood have long been distinguished in popular language, the first having been called rich, and the second poor blood. Nor are the red particles alone affected; for, when rich blood shows the buffy coat on coagulating, it is firm, opaque, and striated generally on the surface, whereas in poor blood it is loose and semi-opaque, like so much ill-strained jelly—appearances unequivocally revealing that the fibrine itself is more or less altered. Besides, in several instances in which the circulation was highly increased both in force and frequency, I have seen the blood burst from an opened vein as brightly vermilion as if it had gushed from an artery; and, in other cases, where the blood had been impeded or slowly circulated through small arteries, it assumed the dark venous character—facts which seem to indicate that the colour of the blood is in some degree connected with its rapid or slow motion. Again, in some cases of fully developed typhous fever, where the tongue was glazed, dry, and brown, and the lips and cheeks of a dusky or purple hue, the blood drawn from a branch of the temporal artery had the venous colour. The circulation of such blood within the arteries is connected with many of the most conspicuous and curious phenomena of the advanced stage of genuine typhus. The cause of this remarkable change can be shown, by dissection, to depend upon a specific Bronchitis, the mucous texture of the bronchial tubes being loaded by dark blood, and besmeared by a copious and tenacious secretion. The experiments of Dr. Edwards have proved, that two changes take place in the blood during respiration, namely, that carbonic acid gas is secreted directly from the blood, and that the oxygen disappears, not having combined, as was formerly supposed, with carbon, to form, thus indirectly, the carbonic acid. Now in the bronchial affection attendant on typhus, one or both of these processes are defectively performed, for the venous blood is returned, imperfectly changed, to the left chamber of the heart, and the circulation of this dark blood in the arterial system is, next to the original taint of the remote occasion, one of the most remarkable changes in the blood in cases of confirmed typhus. Browne Langrish, a century ago, inferred from experiments that the proximate principles both of the blood and of the urine were changed in fever. But with respect to typhus this is not always the case in the beginning, except where Acute Inflammation takes place in a serous membrane, with high excitement, or where an extreme Bronchitis exists, with an imperfectly developed excitement; and then the buffy coat is shown on the blood drawn in the first case, while in the last, the blood usually remains fluid, and the relative proportions between the cruor, fibrine, and albumen often undergo remarkable alterations, apparently from the influence of the Bronchitis, which, by impeding the offices of respiration, materially affects the assimilation of the blood. The proximate principles, too, are changed towards the middle and advanced stages of typhus, rather by the defective digestion attendant on the mucous irritation of the alimentary canal, and the defective assimilation attendant on the bronchial affection, than from the direct agency of the specific taint from which the disorder originally arose; for I have found similar changes in the proximate principles of the blood both in Acute and Chronic disorders, which sprung from remote occasions of a Common kind, and which could not communicate any contamination at once to the blood.* As far as the remote occasions and ultimate effects are concerned, fevers might be advantageously divided into Common and Specific; the Common proceeding from the ordinary agents of nature, such as heat and cold, used in the popular sense, and the Specific arising from peculiar agents, such as putrid matter, and the human contagions. Even in Common fevers, it would be easy to prove that the blood undergoes sometimes very striking alterations, but this is more especially the case in Specific fevers, the peculiar occasions operating on the blood, and that again, in its turn, influencing the condition of certain solid textures. For example, in puncture from dissection three effects are produced. The first a mere local pustule, without any remote disturbance; the second a considerable topical inflammation, which produces fever, on the ordinary principle of irritation, of a common character from beginning to end; but there is a third and more formidable effect, namely, an absorption of putrid matter, in general from a slight wound, which, tainting the blood, produces true typhous fever, usually of the continued type. Now if putrid matter be so introduced into the blood as to give rise to a distinctly marked fever of this Specific sort, the brain and its membranes, the bronchial lining and that of the small intestines are invariably, so far as my dissections have extended, affected by the appearances, of Increased Determination or Inflammation, when the disorder runs its definite course of about three weeks; and as these appearances are found in the male and female, in the young and old, whatever may have been their temperaments or habits, so it is

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* Since these Preliminary Remarks were composed, an ingenious Lecture has been published on Typhous Fever, by Dr. Clanny, which contains the results of some interesting experiments made on the venous blood.

reasonable to conclude, that the contamination of the blood operated specifically on the forementioned textures. If it be contended, that the capillary injection of all the above-named parts is the effect of the continued excitement, the objection admits of a ready answer; since in Common fever, in Acute rheumatism for instance, when the excitement is often higher, and remains longer, such effects are not uniformly displayed. In like manner, the contagions of small pox, measles, and scarlatina first operate on the blood, and that fluid being thereby changed, the solids are specifically affected, especially the skin, and mucous membrane of the air passages;* and these affections, too, if left to themselves, and even often in despite of medical applications, have a determinate course, the blood, apparently, like the water of the Thames, requiring a certain time for its purification, which it effects, perhaps, by throwing off the effete and superfluous matters, through the secretions and excretions. In all of these affections and in many others, chronic as well as acute, we require a more extensive and accurate analysis of the blood; and, as such an investigation might lead to practical suggestions and improvements, it will no doubt be diligently prosecuted by many inquirers, present and future. The time may come, and probably will come, when disorders, whether acute or chronic, which arise from Specific occasions, will be directly removed by remedies acting through the blood, and thus the structure of the solids saved from that indirect derangement, so frequent under the existing and imperfect state of our art. But to return from this digression, not only is the colour of the blood changed with the change in its constitution, but the smell in many cases, especially in Specific fevers, where the venous blood is not duly converted into arterial, from the presence of an urgent bronchitis, and it then emits an unpleasant odour, sometimes like that proceeding from the loathsome vermin, the bug. The blood of those who live on animal food affords more azote than the blood of those who live on vegetables; and it is evident that this fluid is materially affected by a diet of salted meat, as in sea-scurvy, and restored to a natural state by the substitution of fresh vegetable fare. Both the ultimate and proximate principles of the blood, therefore, may be relatively altered, and such alterations, influencing the secretions, would seem, on some occasions, the cause of disturbing the functions of a particular organ of the body. One gentleman, whom I attended for diabetes, lived for some time upon animal food, and every now and then became highly excited and irritable, the pulse quick, the face flushed, the eye bright, the manner

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* The reader will find an excellent paper on the pathology of these affections, in the Medical Intelligencer for June, 1820, by my friend, Mr. Alcock.

hurried and even impetuous, the mind bordering upon delirium. This condition was preceded and attended by an excess of urea in the urine, and all the above-mentioned symptoms subsided when a certain portion of vegetable food was allowed, the surplus of urea disappearing at the same time. It is well known, that if certain ingredients circulate in the blood, not the physical functions only, but those of the mind are disordered; and is it not probable, as the state of the solids is often inadequate to account for the derangement, that mania is, perhaps, more frequently dependent upon a morbidity of the blood than has been imagined? And would it not be advisable to institute a series of most accurate experiments to determine whether or not this be the case? At all events, it shall be shown in the sequel, that, by a reference to the state of the blood, some modifications of mental alienation may be speedily removed, but especially that which has been denominated the brain fever of drunkenness by some, and delirium tremens by others. The circulation of foreign matters in the blood is a frequent cause of fever, and it is in this way, as I have ascertained, that mercury gives rise, in many persons, to considerable febrile disturbance.

The secretions of the blood vary in measure and in kind, and in a pathological survey certainly deserve more consideration than they have yet received. The alteration in the quantity of the secretions is often very apparent. In one case the perspiration is excessive, and bile in another, while, in a third, the action of the skin is diminished, and, in a fourth, that of the liver. In almost all serious disorders the relative proportions of the secretions are generally disturbed, so that if the urine flow copiously, the skin is dry, as in diabetes; or, if there be a considerable discharge of mucous from the colon, the urine is scanty, as in most cases of dysentery; but, as the patients return to convalescence, the equilibrium in the secretions is mostly restored, and where there are no signs of convalescence, we may often relieve the affected texture by acting on a remote one, an aperient thus relieving irritation about the mucous membrane of the fauces or air-passages. On the same principle, when the secretion of the urine is superabundant, we may often reduce it to the natural quantity, by operating on the skin through a vapour-bath. The changes in the quality of the secretions are very various, and seemingly dependent on a great variety of circumstances, many of which are not at all understood, and therefore deserve the more attentive investigation. Some of the most remarkable changes are those which result from Inflammation, the products being influenced by the texture in which it may chance to be seated. If we except the internal ear, there is every where a ready outlet for the depraved secretions of the mucous texture, which are generally more opaque than natural, occasionally mixed with fibrine or albumen, but more frequently with pus. But, in the serous texture, there is no outlet, so that the accumulation of the preternaturally secreted matter may prove a fresh cause of irritation. The most palpable changes in the secretions of this texture are the excess in the quantity of the serum, the formation of pus, but more especially the effusion of fibrine, the last of which is most frequently an organizable substance, capable, however, of being effused from other textures, particularly the cellular, the grand bond of union between all parts of the body. The absorption of pus into the blood appears not unfrequently to induce fever of the hectic type, and tends to vitiate and waste the solids. Some time ago, a gentleman placed himself under my care, in whom ill-conditioned abscesses formed at different times and in different places of the external cellular membrane. The hectic commenced soon after the first, and was maintained, by the successive formation of others, but entirely ceased after the healing of the last; and I could adduce similar facts to show that this cause is sufficient to create hectic. If, however, it should be said, that the local irritation attendant on the formation of pus is rather the occasion of this form of fever than the absorption of that material into the blood, it may be rejoined, that simple irritation does not give rise to hectic, and that wherever, after the fatal termination of hectic, the body has been carefully examined, pus has been found in some part, even in examples of diabetes in which hectic occurred towards their close, and some of which, before I had ascertained this circumstance, seemed to afford exceptions to the rule now attempted to be established. Further, the system is often excessively disturbed on the breaking up or softening of Scirrhus and Fungus Encephaloides, an occurrence which surely cannot be wholly explained on the principles of the local irritation, but which seems, in part, to depend upon the absorption of some deleterious principle formed in the diseased mass. Many persons are exceedingly indisposed, from the retention of matters fermenting and corrupting in the alimentary canal; and, when I shall have occasion to discuss that subject, it shall be shown that such indisposition, in all probability, arises mainly from the absorption of some offending material.

As to effused fibrine, its most remarkable property is the general capability of organization, from which results those adventitious formations which the French pathologists have, not inaptly, called analogous tissues, from their resemblance to the natural textures. But, perfect fibrine is not always effused in Inflammation, or, at least, is not always organizable; and, indeed, we have evidences, that in one case the effusion has a fibrinous, in another an albuminous, in a third an almost gelatinous character, as if fibrine, albumen, and gelatine,* were severally separated from the blood under different modifications or degrees of Inflammation. If, as before hinted, we examine the buffy coat of blood drawn from persons affected by General Plethora and ardent fever at the same time, we shall find it extremely firm, and marked by minute lines, as if it were composed of so many fibres closely knit together; but if we examine blood drawn from many ill-conditioned persons, we may often perceive that the fibrine on the top of the crassamentum resembles loose semi-transparent, dirty, or imperfectly strained jelly, so much does the state of the patient alter the appearance and even the properties of this substance; and it certainly does appear to me, that there is a greater variety than has been allowed with respect to the effusion of what has been denominated, roundly, coagulable lymph, for, I repeat, sometimes it resembles true fibrine, sometimes albumen, sometimes gelatine, and on other occasions is not exactly correspondent in its sensible qualities to any of these substances.

Effusion is one of the most constant attendants of Inflammation, and when that Inflammation has not a Specific but a Common character the effusion is mucous, serous, purulent, fibrinus, albuminous, or perhaps gelatinous, the retention of any of which, to a considerable extent, may be injurious to the part affected, and, through that injury, to the whole body, especially where an absorption of pus, or of any other noxious separation, takes place at the same time. Though the various effusions, ulceration, and mortification, be the acknowledged terminations of Inflammation, yet other changes occur, such as softening, hardening, thickening, attenuation, contraction, and dilatation, in short, different effects proceeding from the same state. If Inflammation attack the lining of the bronchial tubes, and extend thence to the air cells in a weak subject, a watery effusion takes place in the parenchyma of the lung, which thereby becomes softened; but if such an Inflammation should attack a more robust subject, a fibrinous effusion follows, and the substance of the lung becomes harder, or is hepatized, in the language of the schools. If Inflammation attack the mucous membrane of the stomach, in some cases it is found very much thickened, and, in others, very much thinned, as will be shown by two drawings annexed to this number; and if the Inflammation be seated about the urethra

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* Some chemists have supposed that gelatine is only extracted from animal substances, by an artificial process, such, for example, as boiling; but I cannot help suspecting, from certain appearances, that it is occasionally secreted during disease. This, however, is a point which could only be definitively settled by an exact analysis.

or rectum, it not unfrequently leads to contraction of the part; while, on the other hand, if an inflammatory deposit should occur in the coats of an artery and become organized, it offers a mechanical resistance to the passage of blood, and thus leads to dilatation of that portion of the vessel. Though Inflammation might be said to be tangible and perceptible, since it is presented on the external portion of the body, yet we do not know what are the separate or combined influences of the blood, the vessels, the galvanic condition, or the animal heat of the affected texture, in the production of the various results; and if the difficulties which beset this question could be removed, we, probably, might be enabled to solve many pathological problems, or, at all events, be enabled to separate more distinctly some apparently different but unascertained states. Unquestionably, changes occur in the secretions of the blood not evidently traceable to Inflammation; and these are of three kinds, namely, Gaseous, Liquid, and Concrete, which claim the next consideration.

In some affections, the odour of the exhalation from the lungs and skin is offensively altered from the natural one, but not apparently capable of producing any specific disorder either in the patient thus affected or in others exposed to its influence; but there are Gaseous secretions of a peculiar kind in small pox, measles, and scarlet fever, which, being taken into the blood either through the lungs or stomach, produce like affections in other persons. These are indisputably humoral disorders, and the morbidity of the blood operates, as before stated, specifically on certain textures. Many facts might be adduced to show that most of the poisons operate on the solids through the blood,* and when animal chemistry shall be further advanced—when the progress of knowledge shall have given the medical philosopher the power to appreciate more correctly the condition of the fluids, much information will be thrown on some specific affections which are now beyond our comprehension.

The Liquid secretions are sometimes sensibly changed. In typhous fever, as the lips and cheeks become dusky during its perfect developement, a peculiar secretion is besmeared over the tongue and fauces, almost as if the fibrine and albumen had been dissolved, so as nearly to resemble in its adhesive property common melted glue; while in the progress of that specific disorder, the tongue, from the evaporation of the thinner portions of this secretion, becomes dry, having a varnished appearance, like a walking stick; and, at a still more advanced stage, it becomes brown, and, ultimately,

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* In this point of view, the experiments made by Dr. Barry, in his well known work on the Respiration, are extremely interesting to the pathologist.

black, from an apparently carbonaceous deposit. In most cases, the blood is found of a singularly rich dark purple colour, and often remains a fluid gore or jelly in the heart and large adjacent vessels; the specific bronchitis having so affected it as to occasion many of those symptoms which have erroneously been referred directly to the nervous system. We have another and as striking an example of a change of secretion in diabetes, where the urine is super-abundant in quantity, and where, upon evaporation, it affords a saccharine residuum, resembling treacle or molasses. Before the appearance, and during the course of this complaint, the functions of the skin, of the mucous membrane of the stomach or small intestines, as well as those of the liver, are simultaneously or successively disturbed, and the blood, being affected from some fault in the process of digestion, the quantity and quality of the urine are changed, as an ultimate result, the blood having been altered in its properties independently of the kidney, having previously lost, according to the observations of Dobson and Rollo, its ordinary salts, so that the serum resembled whey. The more minute, therefore, our investigations become, the more reason we shall probably have for concluding, that the blood is affected, in most cases, where the secretions are so, and that every thing is not dependent upon the *action* of the vessels, a term to which no precise meaning has yet been attached in pathological discussions. But the urine is often scanty and high-coloured, and wherever that occurs day after day, Inflammation of a serous, fibrous, or cellular texture is mostly present. In the last century, Dr. Baynard had the urine, to use the quaint language of the time, *chymically anatomized*, in a case of highly Acute rheumatism, and it contained only the thirtieth part of the salts usually found in the same quantity of healthy urine, and hence he inferred the acrimony of the blood. In many cases, particularly in nei-phritic ones, the urine contains albumen—a sign of the inflammatory diathesis.

The Concrete secretions are of two kinds, the separated and the attached. Biliary and urinary calculi are specimens of the separated secretions; and what are called gout-stones might, without any great violation of propriety, be placed under this head. But gout-stones are the products of Inflammation, a fluid resembling lymph, as I have found from examination, being first effused, and that finally becoming solid. In like manner, what is called ossification of the valves of the heart and arteries seems to be the effect of Inflammation; for again and again, in different parts of the arterial system, in the same body, I have found evidences of the Inflammation in all its various stages—in one part redness and opacity, in another, the effusion of lymph and thickening; in a third, a fibrous or almost cartilaginous appearance; and, in a fourth, ossification, as if these had been the results of the progressive stages of Inflammation. But we cannot always refer urinary or biliary calculi to Inflammation, for, though the formation of both be occasionally preceded by signs of Inflammation, yet examples occur in which no such precursory signs had been noticed; and therefore we must attribute their formation to some change, the exact causes of which are not yet fully comprehended, but which must vary in kind or degree, as the composition of the biliary, but especially of the urinary calculi, is so various.

The attached secretions are, perhaps, more numerous than pathologists are disposed to allow, but the most remarkable are Tubercle, Scirrhus, Fungus, and Melanosis. All of these begin in a fluid or semi-fluid state; the three first becoming more or less solid, remaining indolent for some time, then increasing, and at last softening so as to be partly or wholly decomposed or liquified. The Tubercle has been supposed by an able and ingenious author, Dr. Baron, to commence as a vesicle, and to be nothing more or less than an hydatid, if I rightly comprehend his meaning. But I have purposely noted a great variety of cases with much care, and found that the vesicular appearance of the Tubercle is simply an accidental occurrence, dependent on the texture of the part in which it is placed. Thus, for example, in their origin, Tubercles may have the vesicular appearance in the lungs; but these, if minutely examined, will be found to be the extremities of the bronchial tubes, or air cells, into which the peculiar deposit, constituting tubercle, often takes place. Frequently I have examined, under a strong light, Tubercles on the serous membranes, and have never yet found them, strictly speaking, vesicles there, though the tubercular points, in many cases, have been extremely minute. It appears to me, that Tubercles are secretions, from the ultimate ramifications of the arteries, called the exhalants; for I have preparations in which they seem to hang from the arterial capillaries like bunches of grapes from the shoot of a vine-branch.* Tubercle generally begins in a semi-opaque point, it becomes wholly opaque, and is then often of various sizes, but most frequently of a millet or mustard-seed. It does not, so far as I have tried, admit of injection at this or any other subsequent stage. It may remain latent for a long time in the primitive semi-opaque, or secondary wholly opaque condition; but it in general undergoes a third change, increasing in size, it may be, to that of a small pea, or several Tubercles running together may form a much larger mass.

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* To show tubercles in this state, it is requisite for the part to be macerated in simple water, exposed to the sun, without a cover, till putrefaction take place, and then it should be washed under a gentle stream, such as that from a cock in a barrel, daily, until the parenchyma of the lung be completely separated.

Having been once progressive in the last-mentioned mode, they generally undergo a fourth change, soften in the centre, and at last are resolved throughout their whole substance by a process apparently analogous to that of suppuration. Sometimes Tubercles are enclosed, like a kernel, in a thin or dense capsule, particularly when they form in glands; and sometimes the cavities occasioned by their solution are surrounded by a false membrane of effused fibrine; but, in the lungs, the mere parenchyma often forms the walls or boundaries of a vomica, or excavation. The number and the increase of the size of Tubercles frequently create irritation in their vicinity, so that a consequent Inflammation of the surrounding texture is not an uncommon circumstance, as may be daily witnessed in the dissection of bodies dead of phthisis pulmonalis. If, as above stated, Tubercle be a secretion from the arterial terminations, it follows that it is but the effect of some preceding change in the solids or fluids, or in both these. Is it one of the products of Inflammation, or is it a peculiar deposit, the immediate pathological causes of which are as yet unknown? Certainly, if the matter of tubercle be examined, it more sensibly resembles the fibrine or albumen of the blood than any other material. But it may be said, that the fibrine or albumen of the blood when effused, during disease, is an organizable substance, and that tubercle, not admitting of injection, is not apparently endowed with that property. It might, however, be answered, that effused fibrine or albumen is not always organizable, as we perceive in weak subjects affected by pericarditis and pleuritis, where loose lympth often exists abundantly, without any adhesions. Moreover, it might be urged, that our incapacity to inject Tubercle is not a perfectly conclusive proof of its want of organization, the vessels being, possibly, too minute to admit the artificial fluid, and the growth and solution of the Tubercle contribute to show that either it, or a delicate membrane which so often invests it, may be endowed with a low degree of vitality, by which it increases till it reach a certain extent, and then passes into decomposition, like many other productions of nature. Against the idea, however, of Tubercle being simply the effect of Inflammation many facts might be adduced, but one may suffice. In many instances, where tubercular points are scattered over the pleura or peritoneum, the serous membrane is transparent up to these points, and only becomes reddened or opaque when the tubercle has become progressive and enlarged, so as to act as a local irritant. Yet it seems probable, that Tubercle is connected with an effusion of the fibrinous modification, though, according to my observations, that effusion is not necessarily connected with Inflammation. Certainly, Tubercle and Inflammation are often co-existent, and so are the hydatid and Tubercle occasionally, but co-existence does not imply a direct dependance or relation. The tendency to Tubercle, like that of other extraneous formations, is strikingly hereditary; and indeed the miliary Tubercle, perhaps the germ, as Laennec supposes of all the rest, has been found in great numbers in the lungs of still-born children; but in every case of this nature which has fallen under my own observation, the mother was tubercular, or tabid, during the period of gestation. Nevertheless, it seems to me quite certain, that Tubercles may be, and frequently are, generated, *de novo*, in the human body and in the lower animals. In almost every instance, when I have traced their development after birth, two circumstances have preceded, namely, a previous condition of debility, accompanied by some degree of attenuation; and, secondly, preternatural paleness of the skin, with co-existent signs of irritation on some portion of the internal mucous texture; and to these changes, whether induced by evacuations, mercury, protracted disorders, bad diet, anxiety, night watching, sedentary habits within doors, or any other enervating circumstance, the operation of a low or variable temperature has generally been superadded, as an exciting occasion to the prior state or predisposition. This doctrine, in a preventive view, is highly important, and it shall be confirmed in the subsequent pages by many facts and arguments, which will prove, not only that Tubercle in general is the ultimate result of an antecedent change in the fluids and solids, but that its development may be prevented, in many cases, by preserving the general strength entire, and enabling the surface, through cool ablutions, and daily and much exercise in the open air, to sustain the shocks of our fluctuating climate; for Tubercles are, in most instances, only produced in the internal organs of an ill-conditioned subject, as vermin are said to be formed upon the skin, when it is kept uncleanly, and when the body is shut out from the wholesome influence of light and air. The existence of tubercles in the lungs of still-born children cannot be held as a valid objection to the view here taken, since the fœtus was formed within a sickly mother, whose blood conveyed to it, perhaps, the materials of contamination, nay, its body and imperfect health might be regarded merely as integrant parts of the mother herself. Upon inquiry, it will be found that those persons who are made the most delicate by domestication and other debilitating causes, are the most prone to consumption, and the same assertion is applicable to the lower animals; whereas, those persons, such as gipsies, hawkers, and the like, who are continually in the open air, provided they be temperate, are the least liable to tubercles; and it would be easy to prove that the same doctrine is verified by a review of the habits of the lower animals, more especially of the sheep and horse.

Scirrhus is another extraneous substance; and, though I have never been able to trace it directly, like tubercle, to the capillary exhalants, yet in all probability it proceeds from those about the affected part. It may be urged, that such an origin is inevitable, as all depositions necessarily proceed from the arterial system; but this, as an universal proposition, I could not admit, being convinced that the veins perform a more important office than has been admitted in many slow affections, as shall afterwards be elucidated in the pathology of chronic Inflammation. The term Scirrhus has been vaguely used in some medical works, to express any considerable induration; but, like surgeons, I shall confine the meaning of that term to express the firm deposition which approaches to a gristly hardness, and which, when cut, is not only crossed by condensed cellular bands, but exhibits a striated and fibro-cartilaginous appearance. If we trace this species of deposition in any external parts of the body, as, for instance, in the breast, it begins in a very small point, which becomes hard at an early period, and which enlarges by the aggregation of other points, thus often growing irregular or knotty to the touch, and, extending itself to the surrounding texture, seemingly converts it to its own peculiar nature. Exactly the same thing, in general, takes place in the internal textures—Scirrhus being secreted there in small points or patches, which run together, and ultimately form the whole solid mass, as may often be seen in the uterus and other organs. The greater hardness of most of these points, at an early stage, distinguish them, in the first place, from common tubercle, and their aggregation into masses, which are generally larger than those formed by the coalition of common tubercle, to say nothing of the fibro-cartilaginous structure of Scirrhus. It is a curious anatomical fact, too, that, though both deposited in points, and therefore often confounded, yet common Tubercle and true Scirrhus hardly ever co-exist, at least I have found them combined in only one case, the former in the lungs, the latter in the uterus. When Scirrhus has attained its maturity, it undergoes a species of ulceration, with partial softening or solution, and is then denominated cancer; the lymphatics having been previously affected, and the whole system then becoming, in general, more sensibly disturbed.

Two other conditions have been confounded with genuine Scirrhus; the one, by way of distinction, might be called Cancellated Induration, and the other Simple Induration. If what many pathologists have termed the scirrhous liver of a confirmed drunkard be properly macerated,* we shall often find that the interstitial deposition being washed away,

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* The maceration should be made in water with a small portion of muriatic acid, and continued for about three months, unless the weather be warm; for, in that case, much less time will suffice to discover the peculiar state of the arteries above noticed, which indeed is evident, in the larger branches, when such a liver is cut across by the scalpel.

the arteries, even the minute ones, are thickened and almost cartilaginous, seemingly from inflammation, appearing not very dissimilar to the cancelli of some bones, or to the blanched interlayings of net-work. The interstitial deposition sometimes appears to exists in patches, and sometimes pervades the whole liver; it is of considerable firmness, and commonly of a greyish-white colour; and though in a recent state it cannot be squeezed out, yet by long maceration first, and pressure between the fingers next, it can always be separated, so as to leave the true character of what has been designated by the term Cancellated Induration. In one case, a solid fibro-cartilaginous patch existed in the liver corresponding to the ordinary Scirrhus, but a little above this patch the Cancellated Induration was apparent, and seemed to be lost in the other. Has Scirrhus any connection with chronic Inflammation of the capillary or larger vessels of the affected part? Has it any connection with the veins of the part, into the calibers of which the scirrhous matter is sometimes effused? More minute attention than has yet been paid to the subject would be requisite to authorise any one to give an unqualified answer to these questions.

The Simple Induration is very common, and may exist in the parenchyma of any organ. It arises from the effusion and subsequent organization of lymph. We have examples of this kind of induration in the red and grey hepatization of the lungs; and chronic Inflammation not unfrequently produces it in the liver, even of children. On the other hand, the substance of an organ is sometimes softened, as if by maceration of the part during life, an effect which is occasionally witnessed in the lungs, where a copious effusion of serum has followed an inflammation extending along the lining of the bronchial tubes to the air cells. A similar effusion, too, into the cellular texture subjacent of the mucous one of the bowels is sometimes perhaps one of the causes of softening of the intestine, particularly its mucous membrane; but as œdema may exist without softening, so we must suppose that the solid undergoes some change before maceration in an effused fluid can materially affect its texture.

It sometimes happens that Scirrhus is formed in one part of the body and Fungus in another; nay, that Scirrhus and Fungus are found in the same organ. Some have, therefore, thought that Scirrhus and Fungus are modifications of the same disease, and hence the names hard and soft Cancer have been imposed. But though these morbid growths do often exist together, yet it must be allowed that they often arise separately, and as they are so discrepant in their anatomical characters, we might surely be allowed to consider them as different diseases, in the present imperfect state of science. But it may be here remarked, that the word Fungus has not always been used with precision in medical literature. At present, however, it is mostly limited to signify what the English have called Fungus Hæmatoides, and the French, the Encephaloid tumour. In this work, the name Fungus Encephaloides shall be adopted, as that at once expresses the two most distinguishing marks of the tumour, its great vascularity, and the commonly contained matter, which resembles brain; but the contents, consistence, colour, and other subordinate points of this tumour occasionally vary much, for some portions of it may contain a serous, cream-like, or gelatinous fluid, in certain cases, and consequently be soft; while, in others, it may have the consistence and almost the character of the pancreas, or even of the mamma, and be of a whitish, red, or rust-brown appearance. In all the cases of this kind which have occurred in my own practice, the tumour, when recently examined, has been surrounded by a cyst of cellular membrane, and lobulated, each lobe, apparently, having also an investing membrane, in general highly vascular; but, on some occasions, the brain-like matter bursts this membranous boundary, and thus escaping into the surrounding structures, gives an appearance, as if the peculiar matter had been formed without an investing capsule. Indeed, Laennec distinctly affirms that he has often seen cases of the latter kind; and my friend Mr. Langstaff* has some specimens in his Museum which seem vouchers of the fact. The Encephaloid matter, like that of Tubercle, does not admit of injection. At least none passes into it when the minute vessels, which apparently secreted it, are filled with a coloured fluid. Sometimes blood is poured out into some parts of the Encephaloid tumour, so as to give it a variegated and almost bruised appearance; both the veins and arteries which enter into its composition having a less contractile power than in the healthy state, so that hæmorrhage is not uncommon. In its progress, it is not unusual to find some portion of this tumour dissolved, and others ragged, or the contents broken or melted down like brain that has undergone softening from Acute or Chronic Inflammation. Though, in some instances, the great enlargement of the morbid growth had seemingly inflamed and deranged the surrounding textures of internal organs, yet in other instances I have been surprised to see many considerable tumours of this

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* I cannot allow this opportunity to pass without observing that Mr. Langstaff's Museum is a monument of his industry and genius. If that gentleman had published, from time to time, the result of his researches, he would have anticipated most of what has been done by the Continental writers, so uncommonly various and extensive is his knowledge on pathological anatomy.

kind, which had been long seated in the liver and other viscera, without having produced any such alteration in the organ where they were seated; so different in this respect is the Fungus Encephaloides from Scirrhus, which extends its peculiar character to whatever structure it may be attached. Are there are any anatomical discrepancies to authorise us to deviate from the received nomenclature of certain fungous tumours? Might we arrange the modifications of one class under the term Fungus Encephaloides, and those of another under that of Fungus Hæmatoides? or are we, upon all occasions, to concur with authors in considering these as mere varieties or stages of one and the same disease? My information on this subject is too imperfect to enable me to speak very decisively, though I cannot help suspecting that too sweeping and simple a generalization has been made in regard to fungous affections. One kind of growth, bloody and gelatinous, sometimes springs from the mucous membrane of the nostrils, which does not surely assume the true characters of the Encephaloid, and a similar one is sometimes attached, like so much placenta, to the mucous lining of the uterus, as if it were a pulpy mass of organized fibrine, having no brain-like matter. The Encaphaloid may,* and sometimes does, attack such textures, but still there are bloody tumours, as above described, which preserve throughout a peculiarity of anatomical construction, and can we with propriety arrange these with the Encephaloid under one abstract name? It certainly would appear to me, that we might as well thus classify some of the excrescences, such as certain spongy warts, which, though of a fungous appearance, have yet distinctive characters. But, having cursorily touched upon this point in passing, I must leave it for the careful examination of subsequent pathologists.

Besides, other tumours, observed from the infancy of the art, require a separate consideration, among which may be mentioned the atheromatous, the mellicerous, and the steatomatous. The atheromatous and mellicerous might be regarded almost as the same, the latter as an aggravation of the former. They both seem to have their seats originally in the sebaceous follicles of the skin, which become enlarged and thickened from the distension of the contained secretion, changed from its natural state, especially in the

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* It appears to me, that what Mr. C. M. Clarke, in his Observations on the Diseases of Females, has denominated the Cauliflower Excrescence of the Os Uteri is merely a variety of the Encephaloid, at least I have found it as such; and if that distinguished Accoucheur had extended his investigations, he would have been assured, that it is not, as he seems to suppose, peculiar to that part, but attacks almost all textures, and generally exists, like Scirrhus, in more than one organ at the same time.

melliceris; but it is a singular fact, that the growth of such tumours may, sometimes, be retarded, nay, that they may be made stationary, within a given dimension, by letting or squeezing out the contents through a small aperture—an event indicating that the size may be dependent on the degree of mechanical pressure within the diseased follicle or cyst. The steatomatous tumour has a deeper seat, and is less circumscribed than the atheromatous or mellicerous. It is an inordinate collection of fatty matter in some of the compartments of the subjacent cellular membrane, which, in like manner, become enlarged, and in some instances to an extraordinary extent. Other tumours form in a similar manner from increased secretion and expansion of the natural texture, the fluid being occasionally found in a single bag, as may be perceived under an elevated portion of the serous membrane of the liver; and, at other times, in a number of bags, as when the ovarian vesicles of De Graaf have been manifestly enlarged. These single or complicated cysts have often been mistaken for hydatids, but they may be easily distinguished. The true hydatid always has an outer capsule, and the latter having been opened, the former will be seen either perfect and unattached, or blighted and withered, or the rudiments of this animalcula will be found inside the capsule; whereas in other cysts, however formed, no traces of the hydatid exist there. At the same time, it must be confessed that encysted tumours are not always a mere expansion and consequent change of natural structure, the cysts themselves, on many occasions, being new formations. This has appeared to me evident, on inspection, particularly in diseased ovaries, a fine specimen of which was recently shown to me by my friend Dr. Hodgkin,* where the work of adventitious manufacture, if we may so speak, had been carried on most extensively, delicate or strong membranes, with their contained fluid, stretching across in various directions. The conformation of such cysts seems to have a considerable influence upon the fluid contents, either immediately or remotely; but, whatever analogy may seemingly exist between such adventitious productions and those which are the result of Inflammation, yet that is not sufficient to justify us in hazarding an opinion respecting the true causes or nature of their formation. Would a more minute examination of the developement of the natural textures of the fœtus, or of the membranes of an egg, or of the chick in one, at all assist us in explaining such morbid productions? There are many paths in pathology which have

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* Dr. Hodgkin's mind is not only deeply imbued with all that is valuable in the medical literature of the age, but it is gifted with great original power and simplicity; and, having been closely directed to pathological anatomy, is admirably well fitted to throw new lights over a science which still presents many obscurities.

not yet been fairly opened, and we must pursue one way by a dim and doubtful light, till the inductive philosophy shall have revealed more of the laws of organic life. Vegetables seem to perform many of the functions of animals. They have circulation, respiration, nutrition, a modification of sensibility, or irritability at least, and propagate their species; and they seem liable to many disorders, some of which may be traced to a taint in the fluids, and some, more obviously affecting the solids, have a striking resemblance to human diseases. Perhaps an investigation, not only into the physiology, but pathology of vegetables might be useful, by furnishing us with new or analogous facts and suggestions. It was before hinted, that mechanism, a peculiar fluid, and electricity all concurred in the production of the animal secretions, and a similar ministry of means is found in those of the vegetable kind. And does not the grafting of branches to produce varieties of fruit in the same tree show that some modification of mechanism, above all, is essential to the discrepancy which thus results? And does not, probably, a similar arrangement and effect obtain in the separations of the animal economy?

Melanosis is another peculiar secretion. It has, very aptly, been compared to the pigmentum nigrum of the choroid coat; but its colour varies from a dark brown to a deep blue or green black. It is sometimes spread like so much paint under the serous membrane of the intestines, for instance, or diffused through the substance of the spleen; while, in other cases, it is circumscribed in distinct patches, as in the parenchyma of the lungs, liver, or kidnies; in short, being occasionally found thus diffused or limited in most of the organs. Some authors have supposed that Melanosis, like Tubercle, Scirrhus, and Fungus, is associated with an organized affection, *sui generis*, of the solids; but in all the examples which I have examined, it seemed to be nothing but a secretion, sometimes occurring in textures otherwise apparently natural, sometimes in those chronically inflamed, and sometimes co-existent with either Scirrhus, or Fungus. As the last-mentioned conjuncture is not very uncommon, possibly it may have been the cause of inducing some men to imagine that Melanosis was always necessarily connected with a proper and specific change in the solids of the part; an opinion, too, which might have the colouring of truth, from the circumstance that Melanosis sometimes not only distends the cellular membrane where it is seated, but is mixed up with the products of Inflammation, as well as of Scirrhus or Fungus Encephaloides. It, however, would be presumptuous in me to contest the opinions of others on the narrow ground of my own observation. Melanosis, in all the cases which I have met with, was simply an interstitial deposit, and was rather formidable, from the ill-conditioned state of the body, or the affections with which it was conjoined, than from any malignity in its own nature. Doubtless, however, Melanosis, as a morbid product, may irritate a sound part, or aggravate, on the same principle, an organic affection, with which it may chance to be co-mingled. As far as my recollection serves me at present every case of Melanosis which I have witnessed was accompanied by more or less of chronic bronchitis; but it would require the care of other men to determine whether this conjunction be constant, or merely occasional; for no error has been so prejudicial in medical philosophy as universal conclusions, drawn from a limited number of particulars. It is clear, however, that bronchitis, simply of itself, is not sufficient to produce Melanosis, numerous cases of the former occurring, in which, on examination after death, no trace of the latter is any where discernible. But, on the other hand, is it at all probable, that bronchites may be *one* of the precursory or concurring causes of Melanosis? Is it possible that, by changing the whole mass of blood into a more venous character, bronchitis may favour the dark and peculiar secretion, respecting the composition of which chemists have differed? This question must be answered by future observers; and as we are ignorant of the true pathological processes of this and other peculiar separations, it is an imperative duty to observe more narrowly, that we may try to refer them to their legitimate causes.

With reference to Tubercle, it has appeared to me, as already stated, that we have almost always evidences of the body being disordered before its formation or developement, the functions of the skin and those of the mucous texture being more especially disturbed; and it shall afterwards be shown that this view of the subject is not a mere hypothetical point in medical philosophy, but that its practical application is of the utmost importance in the prevention of tubercular disease. In regard to the origin of Scirrhus, Fungus, and Melanosis, we may be said to know little or nothing precise. They are the effects of disturbances in the solids or fluids separately or combinedly; but the circumstances which attend their formation are unknown, the ultimate results being the only evident and tangible links in the chain of morbid phenomena. It has been ascertained, that the blood undergoes changes, that the solids, through which it circulates, are affected by its quantity, quality, or distribution, and that the electricity varies in certain disorders, as compared to the healthy state; but the particular and conjoint power of these instruments or agencies is a proposition left for the genius of succeeding pathologists to explain, by the application of a higher degree of knowledge than we at present possess. An exact register of climate, the corporeal and mental peculiarities, the habits and the ages of patients, might possibly add some information on the subject of the predisposing and exciting causes of these affections; while a more minute attention to the states of the body which precede and attend them, with an accurate analysis and examination of the condition of the fluids and solids, at different stages, might, peradventure, remove much of the existing obscurity. It would seem that these and other diseases prevail most in particular families; and, when the public prejudices against *post mortem* examinations shall have given way to an enlightened philanthropy, we shall probably have not only curious, but useful histories of the physical defects of families transmitted from parents to children—histories which may enable medical attendants, in some instances, to save the offspring from similar calamities, by pointing out those remote occasions by which the latent tendencies are called into active existence.

Tubercles occur much more frequently under forty, whereas Scirrhus is most common above that age; but, contrary to what some authors assert, Fungus unquestionably occurs at all ages, and I have met with Melanosis in the bodies both of young and old patients. Other Productions than these have been noted, and doubtless sometimes occur, but, as far as I have observed, their characters are yet too indistinct to require a separate description in this place. The forementioned affections, namely, Tubercle, Scirrhus, Fungus, and Melanosis, have not the attributes of a proper life, and, consequently, cannot propagate their kind. But, living bodies, the origin of which, if possible, is still more obscure, do exist in man and in the lower animals. Some of these are unattached, as the tape worm, the round worm, and the small thread-like worms; but the hydatid, though belonging unquestionably to the class vermes, attaches itself, by cellular membrane, to various organs, and, like certain tumors, may operate mechanically on the adjacent parts, as we often perceive in the liver.

It must be manifest, from the foregoing hints, that both the solids and fluids are concerned as causes in those various deviations from the healthy state, called, abstractedly, disease; but we know too little of the mechanical, chemical, and vital functions of the body, to approach to any thing like a satisfactory solution of many of the healthy and morbid phenomena; so that, if we except some known irregularities in the momentum, velocity, distribution, quantity, and kind of blood, or its secretions, we are constrained chiefly to note the changes in the solids, though these are probably the consequences, or, at all events, the concomitants, of unknown conditions of the fluids. Anatomically speaking, we might arrange all human maladies under three classes, namely, first, those which are unaccompanied either by Inflammation or any extraneous Formation; secondly, those which are accompanied by Inflammation; and thirdly, those which are accompanied by some extraneous Formation, such as Tubercle, Scirrhus, Fungus, and Melanosis. In this Work therefore, it would be alike absurd and impracticable to attempt to describe all the pathological states connected with certain complaints; but sketches of the most essential appearances shall be given, with an explanatory text, as Illustrations of the Work which will shortly appear on the Remote Occasions, Prevention, Nature, and Treatment of Diseases of the Stomach, Bowels, and Liver. The Morbid Anatomy of these parts will therefore be published in the order here mentioned, with a succinct history of the symptoms.

The Stomach is liable to many affections, but to four, more important than the rest, which may be anatomically distinguished from each other: namely, Increased Determination, Inflammation, Scirrhus, and Fungus Encephaloides. This Fasciculus will relate chiefly to Inflammation; and the second, chiefly to Scirrhus and Fungus. It may, on that account, be expedient here to premise some remarks on the general effects of Increased Determination, but especially of serous and mucous Inflammation of the Stomach.

Some pathologists on the continent seem to think, that Inflammation of the Stomach very frequently occurs, especially in the mucous texture; whilst some in this country conceive, that, though this viscus be greatly abused by our artificial and luxurious habits, it is, nevertheless, but seldom the seat of actual Inflammation. The truth appears to lie between the extremes of these opinions; for while I am ready to admit, that Increased Determination has often been mistaken for Inflammation of the mucous texture of the stomach, yet I am equally certain, that Inflammation is not so very uncommon a circumstance, oftener, indeed, assuming the chronic than the acute character. Increased Determination is not accompanied by the combined symptoms and progressive effects of Inflammation during life; and though, after death, the mucous texture of the stomach be found red by a preternatural injection of the capillary vessels, yet none of the genuine products of Inflammation are present, such as effusion, softening, thickening, or so forth, and it may thus be easily discriminated from the latter.

When the body is examined shortly after death, the vestiges of acute and chronic Inflammation of the serous and mucous membrane of the stomach are generally very distinct. In acute Inflammation, the capillary vessels, but more particularly the venous ones, are much injected by red blood; and these are, besides, some of the palpable products of Inflammation connected with effusion. These circumstances, being conjoined, are indisputable evidences that Inflammation had existed. The injection of the serous membrane is most frequently arborescent, the minute arteries and veins shooting, as it were, like the branches of a tree, in different directions, or, what may perhaps be a more apt comparison, winding across, like the vessels seen in a leaf when held between the eye and the light. Sometimes the redness, in part, is irregularly dotted, smaller and larger points appearing here and there, as if partial exudations of blood had taken place; yet, if these points be accurately examined, they will be mostly found nothing but engorged capillaries, in all likelihood the exhalants themselves, which, being still more extremely loaded, probably admit of that actual exudation, which does occasionally occur. The serous membrane over the site of the Inflammation loses its natural transparency, and becomes more or less opaque. Another circumstance remarkably characterises acute Inflammation of the serous membrane, namely, that it is much more easily separable than natural. Indeed, it may be generally stripped off by the fingers, just as the rind is peeled from a ripe orange. Fibrine, pus, or some effusion of an intermediate character, is usually seen on its free surface, while serum is found in the vicinity, commonly discoloured by an admixture of one of the forementioned products. In most of such instances, a large quantity of gas is generated within the stomach, evinced by the extreme distension of that organ even during life.

One of the most striking differences between acute and chronic Inflammation of the serous membrane, but more particularly that of the stomach and bowels, is the greater injection of the larger as well as small branches of the veins in the chronic, by which a darker colour is given to the part. Having seen this condition of the veins an almost constant attendant, I have inferred that these vessels are more intimately concerned in the phenomena of Inflammation, especially when chronic, than has been allowed in our reasonings on the subject. Not only is the opacity more evident in the chronic Inflammation of this texture, but the thickening more considerable and conspicuous. The late most able and excellent Laennec supposed, that serous membranes were not really thickened by Inflammation, but that the effusion of fibrine becoming organized on their free surfaces gave rise to the deception. Though such an apparent thickening be not uncommon, nevertheless it is not always thus produced. Bichat supposed that the serous membrane was composed of one layer; but if we macerate it for about ten or twelve weeks, in nearly equal portions of vinegar and water, we may divide it, by nice management, into two or even more laminæ, as shown by specimens in my possession. The laminæ are knit together, by cellular membrane, into which the effusion of fibrine sometimes takes place so copiously, that the substance of the serous membrane is really thickened. Where fibrine has been interstitially poured out in this way, an increase of density is the necessary consequence; but when a more albuminous, gelatinous, or serous fluid has been principally effused, which does not admit of subsequent organization, the serous membrane is often pulpy, as if from maceration, an appearance most frequent in lax habits. Softening is a common, but not a constant attendant of chronic Inflammation, as may be perceived, where adhesions exist between the serous membrane of the stomach and that of the liver, or between one portion of this texture and another covering the coils of the intestines. Ulceration of the serous membrane of the stomach is a rare occurrence from common Inflammation, at least, I have only met with it occasionally; in the one case, occurring originally in that structure; in the other, reaching it through an extension of disease, from the mucous lining of that viscus.

When the mucous membrane of the stomach has been acutely inflamed, the remaining redness is intense, generally diffused as if by a brush over the greater portion of its surface, but sometimes circumscribed in broad stripes or patches, gradually shaded, or breaking off somewhat abruptly, leaving portions comparatively of a sound appearance. At first sight, the acute Inflammation of this texture has a close resemblance to painted velvet, it appears so red and raised; but on a closer inspection, the redness will be found to be partly of the arborescent, and partly of the dotted form. The combinations can be distinctly seen, if the inflamed portion of mucous membrane be spread upon the clean pane of a window, the redness then having at once a ramified and freckled appearance. Thickening, puffiness, softening, and easy separation, usually mark Inflammation of this membrane;* but they are more manifest in that modification of Inflammation which might be justly called sub-acute, and which stands between the acute and chronic, being less urgent, and more protracted than the former, though of much shorter duration than the latter. These changes, too, accompany chronic Inflammation of the mucous membrane, which then generally has a gelatinous appearance, blended with an irregularly liny, and almost freckled state, the first, from the partial softening of that texture, and the second, from the ramification of the minute subjacent vessels; while at the same time the mucous follicles appear either prominent, like papillæ, or are actu-

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* By long maceration, the mucous texture of the bowels may be shown to consist of three laminæ, which almost appear like cobwebs, and which are seemingly united by cellular texture, resembling so much fine intervening lace-work. It is this cellular structure which is the main seat, in the different organs of the body, of most of our diseases.

ally ulcerated, and the veins in the serous membrane are injected and enlarged. The existence of these follicles makes a considerable difference in the pathology of Inflammation of the mucous membrane compared to that of the serous, as will be amply elucidated in the sequel.

The Satyr, in the fable, expresses his surprise, that the man should blow hot and cold alternately with the same breath; and, in the present state of science, we might justly wonder to find some of the effects of chronic Inflammation so opposite. In most cases the inner lining of the stomach is preternaturally red; but in some it is almost as blanched as a white sheet of paper—a peculiarity of a very striking kind, which may, possibly, have been effected by the action of the gastric juice upon an already morbidly altered part. Moreover, the stomach is often thickened, but occasionally it is much attenuated, in conjunction with chronic Inflammation of the mucous membrane. Some of the most remarkable effects of chronic Inflammation are referrible, directly or indirectly, to the various effusions. Thus hardening, thickening, and opacity are generally connected with an effusion of lymph into the cellular membrane, by which the textures of an organ are united; and whenever these effects are very conspicuous, we shall, I suspect, most frequently find, that the arterial ramifications have been particularly implicated in the Inflammation. On the contrary, softening is mostly connected with an effusion of an albuminous, gelatinous, serous, or mucous description; and when this state is the most prominent, my examinations would lead me to conclude, that the veins have been quite as much, or, perhaps, even more concerned than the arteries in the work of effusion. But it would be illogical to assert that softening is always the effect of Inflammation; for it sometimes, as in the bones, arises from a defect in the process of nutrition, and, no doubt, exists in other structures from the same cause. Softening is likewise the consequence, not only of suppuration, but of sphacelus, and arises sometimes from a slow species of decomposition, as in the breaking up of scirrhous and fungous tumors. Is attenuation at all dependent on interstitial absorption, the part having previously undergone some change from the destructive power of Inflammation? Or is it possible that the attenuation, in some instances, may be the effect of extreme distention of the stomach, with which it is so frequently combined? Where the stomach is much distended, the inner lining is generally found smooth, and when that texture is corrugated, it generally depends upon the contraction of the muscular coat. Every variety of Inflammation, but more especially the chronic, may lead, in the first instance, to enlargement of the mucous follicles, and, in the next, to ulceration, which spreads to the villi, and thence may extend in all directions; sometimes having a round, and sometimes an irregular form, sometimes having smooth, and sometimes ragged edges. But the mucous follicles of the Stomach, notwithstanding the abuse of that organ, are less liable to be affected than those seated in certain parts of the Bowels. It is not my design to attempt to inquire into the rationale of such facts in this place; and therefore I shall proceed to give delineations of the most important points in the morbid anatomy of the Stomach, which will embrace serous and mucous Inflammation as well as Scirrhus, and Fungus Encephaloides, in connexion with similar affections of the Œsophagus.

EXPLANATION OF THE PLATES.

PLATE I.

REPRESENTS not only the red suffusion, and arborescent injection of Acute Inflammation of the Serous Membrane of the Stomach, but a deposition of fibrine on its surface, and some between its laminæ, by which it is rendered thicker, softer, and less transparent than natural.

a. The thoracic portion of the œsophagus.

b. The abdominal side of the diaphragm.

cccc. Portions of fibrine on the outer surface of the stomach

d d. Engorged state of the veins of the stomach.

e. The Pyloric extremity of the stomach.

f. The Duodenum.

g g g. The Injected state of the Capillaries, which, from their extreme redness, look like arteries, but which when closely examined, on the body shortly after death, will be found to consist almost entirely of the minute extremities of veins. If a serous membrane thus injected be properly dried, the arterial ramifications can be seen empty, while the vinous ones remain full of blood. The vermilion colour of the blood in the part is, probably, the reason why the injection has hitherto been deemed arterial in Acute Inflammation. But the injection even of the minute veins is darker in Chronic Inflammation, but more especially of their larger ramifications.

Plate 1. Part I.

Drawn by W.P. Cocks

Printed by Engelmann & Co.

On Stone by Thos Fairland

Published by Baldwin and Cradock, London. May, 1828.

PLATE II.

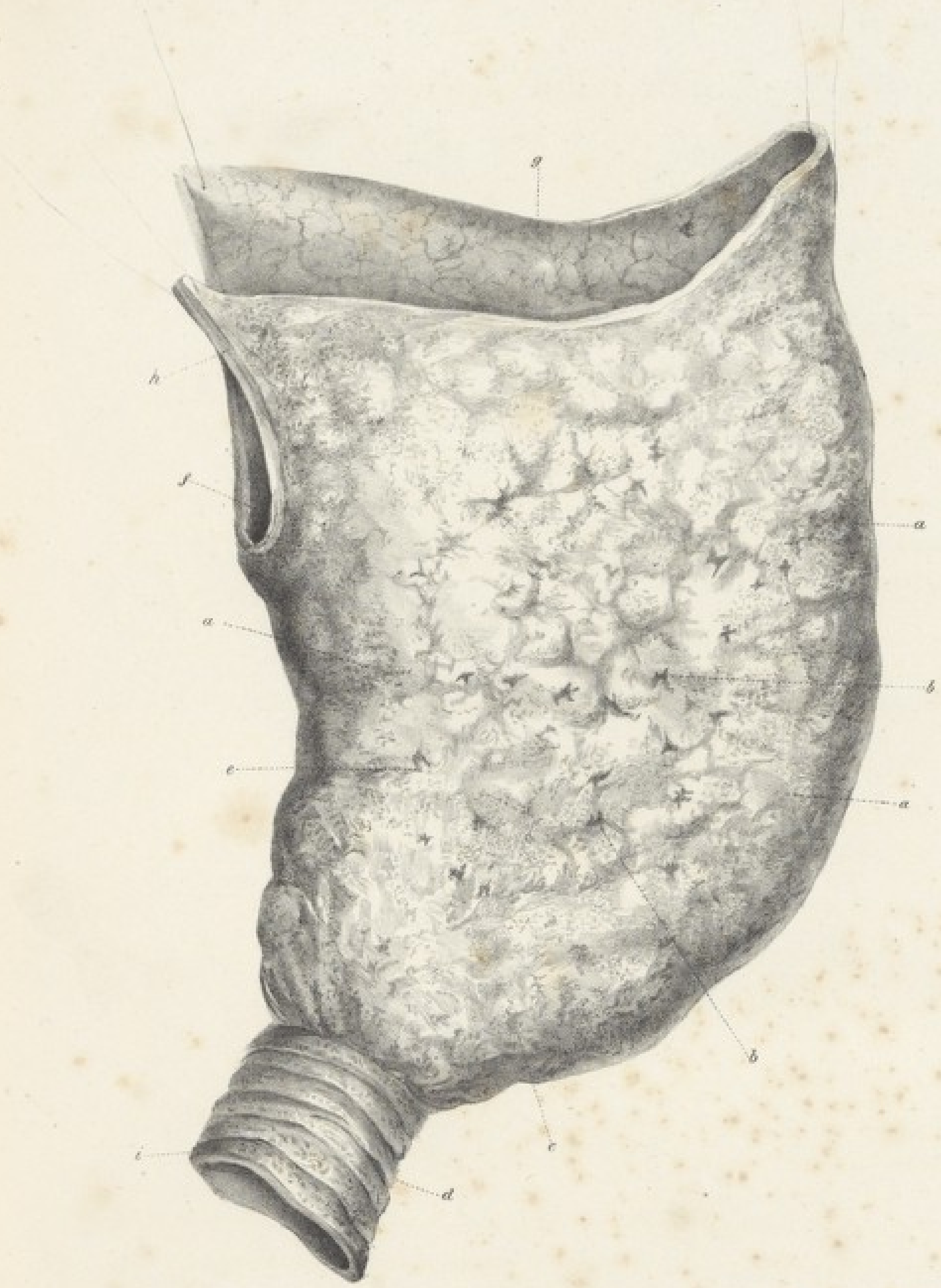
THIS was copied from a stomach, in which the Inflammation commenced under a Sub-acute character, and terminated in about three weeks. The mucous texture was highly injected, pulpy, and thick, and in its centre there were several spots which seemed ecchymoses, but which, examined by a good glass, were nothing but intensely injected vessels.

Some of the mucous follicles were simply enlarged, and others were in a state of ulceration. These are the several points attempted to be delineated in this Plate.

a a a. The spots resembling ecchymoses.
b b. Ulceration of the mucous follicles.
c. Thick and pulpy state of the pyloric extremity of the Stomach.
d. The valvulæ conniventes.
e. The injected and softened mucous membrane.
f. The Cardiac extremity of the stomach.
g. The serous membrane of the stomach.
h. Very slight abrasion of the mucous texture.
i. The Duodenum.

Redness and abrasion are found in the mucous membrane of the stomach in most of those cases which terminate fatally from the acrid poisons applied to that part, a fact worthy of remembrance in a legal as well as a medical point of view.

No Plate is given of Chronic Inflammation of the serous texture of the Stomach, but one will be given of the intestines, illustrative of the darker hue, and other appearances proper to Chronic Inflammation of that membrane.



Drawn by W. P. Cooke
Printed by Engelmann & Co.
On Stone by W. Fairland

Published by Baldwin and Cradock, London, April, 1828.

Plate 3.

Drawn by W. P. Cocks
Printed by Engelmann & Co
On Stone by W. Fairland
Published by Baldwin & Cradock, London. May 1828

PLATE III.

THIS plate represents Attenuation, with the Solution of some textures of the Stomach, from Inflammation. In the splenic portion of the Stomach from which the drawing was taken, the mucous, muscular, and cellular texture was completely destroyed, the serous coat having been the only one which resisted disorganization. The parietes at the cardia and pylorus were healthy, but the mucous membrane was attenuated in many places, and there it had a saponaceous feel. A great many bloody spots were scattered over the villi of the Stomach.

a. Complete destruction of the mucous, cellular, and muscular texture.

b. Softened state of the mucous texture surrounding the attenuated portions.

c. The serous membrane, with its injected vessels.

d d. The bloody spots.

e. An attenuated portion of the Stomach.

f. The serous coat of the Stomach.

It is a curious fact, that the marked attenuation is often defined most distinctly in some particular portion of the Stomach, as exhibited in this Plate.

Plate 4 Part I

Drawn by W. P. Cocks

Printed by Engelmann, &Co.

On Stone by Thos Fairland.

Published by Baldwin & Cradock, London, April. 1828

PLATE IV.

This Specimen of perforation was sketched from the Stomach of a Child nine months old, who, having been seized with great pain after weaning, sunk in a few days. The large arch of the Stomach was dissolved, and had a gelatinous appearance, not the vestige of a vessel being evident on the softened parts. The mucous and serous tunics were of a pearly white colour, but the vessels in the healthy portion of the serous one were filled with venous blood. Neither preternatural thickness nor thinness existed, but the edges of the portion destroyed were ragged and remarkably pulpy.

a. A portion of the diaphragm.

b. The cardiac orifice, the mucous texture of which is softened and attenuated.

c. The œsophagus.

d. The gelatinous or pulpy condition of the mucous texture.

e e. The injected state of the vessels of the serous membrane.

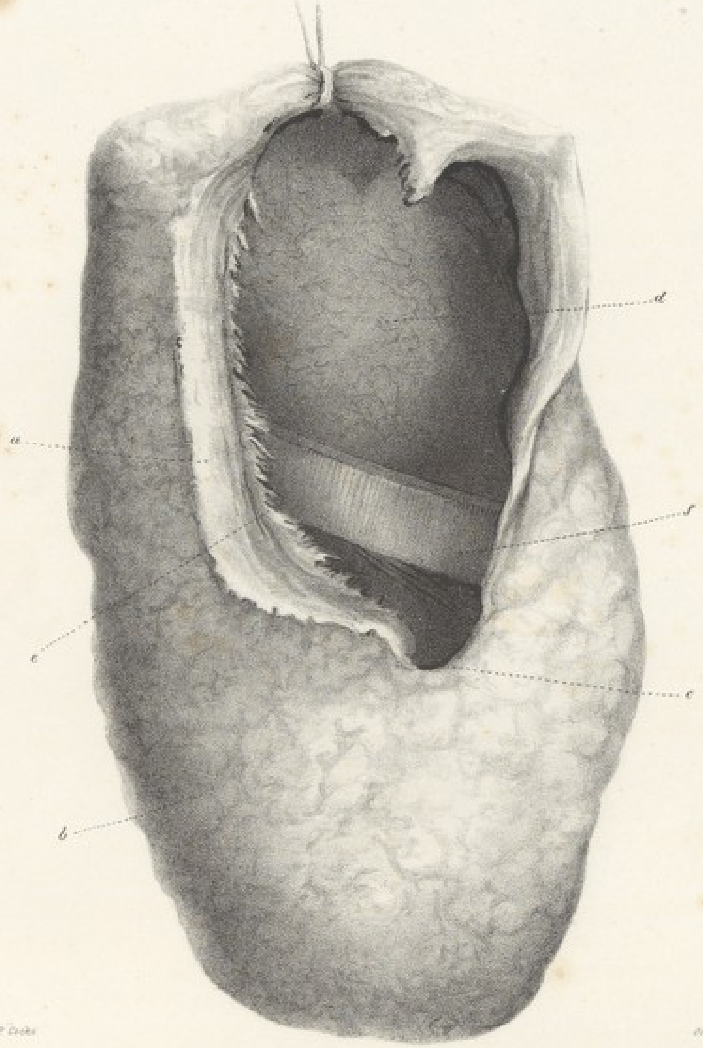
f. The pyloric extremity of the Stomach.

g. The duodenum.

h h. The ragged appearance of the mucous texture.

i i. The softened serous membrane.

Plate 5.



Drawn by W. P. Cocks

On Stone by Wm. Fairland.

Published by Baldwin & Cradock, London, May, 1828.

PLATE V.

Shows the thickened and pulpy state of the Stomach, which occasionally occurs, and which arises from an effusion of lymph between the cellular layers of the mucous, muscular, and serous tunics from Muco-gastritis, or from Sero-gastritis.

a. Part of the Stomach thickened to more, perhaps, than thrice its natural dimensions. The lymph in this section is seen to separate each tunic.

b. The pulpy and velvet-like appearance of the mucous surface, the inside of the Stomach being represented as turned out, as it is in the original specimen in my Museum.

c. The cardiac extremity of the Stomach.

d. The serous surface of the Stomach, the capillary vessels of which are dilated and much injected.

e. A portion of the omentum majus on the serous surface.

f. A small piece of wood to keep the walls of the Stomach asunder.

In two other cases of this nature, this muscular coat of the Stomach was thickened to a very great extent; but this is far more frequently the case when Schirrus is seated in the Stomach, as shall be afterwards explained.

THE SYMPTOMS.

ACUTE INFLAMMATION OF THE SEROUS MEMBRANE OF THE STOMACH.

If the serous membrane be alone acutely inflamed, there is an urgent pain in the region of the stomach, increased considerably by pressure there, and even by a deep inspiration. The breathing is hurried and anxious, the skin hot, the pulse very quick, and remarkably small, but for some time it will be found harder or more incompressible than in health, only becoming really weak and soft towards the close. The tongue is covered by a whitish fur, and the stomach is very flatulent and irritable throughout, nausea, retching or vomiting being present, especially when any food or medicine is given.

There are two distinct stages in all Acute Serous Inflammations—one of Excitement, and another of Collapse. In the stage of Excitement the heat of the skin is higher than natural, the pulse, however small, more resisting than natural, and the respiration though rapid, is not embarrassed; whereas, in the stage of Collapse, the heat falls first on the extremities, and then on the trunk, the pulse grows soft and weak, and generally quicker than before, while the respiration is carried on feebly. These two stages are usually well marked in Acute Inflammation of the Serous membrane of the Stomach, the vomiting becoming more urgent, the skin damp as well as cold, and the face sunk in the last stage, or that of Collapse.

SUB-ACUTE INFLAMMATION OF THE SEROUS MEMBRANE OF THE STOMACH.

Though, pathologically speaking, Acute and Sub-acute Inflammation only differ in degree, the former being more fully developed than the latter, yet this difference in degree leads to such important modifications, as to justify the distinction as above designated. In Acute Inflammation the fever is higher, the local disturbance of the part affected is greater, and its progress more rapid than in Sub-acute Inflammation, the first terminating in a few days, while the last generally goes on for between two or three weeks, if left to itself. These differences are all displayed in Acute and Sub-acute Inflammation of the Serous membrane of the Stomach, the last mentioned form having a milder character, and a more protracted course. In our nosological works, the broader and more obvious forms of Inflammation are alone noticed, and as such striking descriptions might mislead the inexperienced on some occasions, I may here remark, that though, in Sub-acute Inflammation of the Serous membrane of the Stomach, pain in the site of that organ, and fever be attendant, yet vomiting is often absent, there being more frequently a loathing of food, with an occasional nausea or retching, till towards the conclusion, when vomiting mostly supervenes.

CHRONIC INFLAMMATION OF THE SEROUS MEMBRANE OF THE STOMACH.

In Chronic Inflammation of the Serous membrane of the Stomach, fever is either wholly absent, or, if present, it has a slow consuming character. It is not, so far as my dissections have gone, a common circumstance to find Chronic Inflammation confined to the Serous membrane of the Stomach alone, it generally being complicated with Chronic Inflammation of the Serous membrane of the Bowels, or of the Liver. Chronic Inflammation of the Serous membrane of the Stomach is at all times obscurely denoted, but the forementioned conjunction tends to make the diagnosis more difficult. This form of Inflammation, however, may mostly be detected, by the symptoms having a permanent seat and character, and by the effects of the disorder being increasingly marked on the frame at large. There is more or less pain in the epigastric region, aggravated by moderate pressure, and accompanied by a sense of distention and confinement, particularly after any thing like a full meal. There is constant uneasiness about the stomach. It may be at times obscure, but is very liable to be increased by whatever offends that organ, which is then always more flatulent and irritable than natural. The flesh wastes, the skin acquires a sickly hue, the mouth is dry or clammy, the tongue is covered with a whitish fur in the centre, and is not only pale about the tip and edges, but often appears as if it were broader than before the attack.

Pathological anatomy points out the propriety of discriminating Serous from Mucous

Inflammation, and we might, therefore, call the above described modifications, Sero-Gastritis, and when that condition affects the mucous texture, we might call it Muco-Gastritis, the symptoms of which are next to be enumerated.

ACUTE AND SUB-ACUTE INFLAMMATION OF THE MUCOUS MEMBRANE OF THE STOMACH.

In Acute Muco-Gastritis, the pain is of a more burning kind than in Acute Sero-Gastritis, and the desire for cold liquids is more insatiable. In Acute Muco-Gastritis, the pulse is softer, and the fever less ardent, than in Acute Sero-Gastritis. In Acute Sero-Gastritis the tongue is pale at the point and sides; but in Muco-Gastritis the tongue is vividly red at the point and some way round the margins, nay, often thus coloured over a considerable portion of its surface.* These are the symptoms *proper* to each of the above varieties of Acute Inflammation, a concentration of heat about the Epigastrium, irritability of the stomach, and anxious respiration being *common* to both. The same remarks are applicable to Sub-Acute Sero-Gastritis and Sub-Acute Muco-Gastritis when contrasted; but it must be constantly remembered, that there is less fever and less local disturbance in the Sub-Acute than in the Acute Inflammation, while the former is of longer duration than the latter, these being the three essential points in which they differ from each other. It is of great importance to bear these in mind, as the Acute Inflammation allows the medical attendant far less time for the execution of his plan than the Sub-Acute, and requires, in general, not only more prompt, but more powerful measures.

CHRONIC INFLAMMATION OF THE MUCOUS MEMBRNE OF THE STOMACH.

Chronic Inflammation of the Mucous Membrane of the Stomach is a far more frequent occurrence than Acute and Sub-Acute Inflammation, if we except the operation of the acrid poisons upon that texture. Chronic Muco-Gastritis is attended, generally, by a vermilion tint of the tongue at the tip and edges, while the papillæ, for the most part, are red, and also raised, somewhat like the points upon a strawberry.† But the most

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* At the conclusion of this work, a Series of Drawings, illustrative of the various appearances of the Tongue, will be given.

† Chronic Muco-Gastritis and Chronic Bronchitis are often conjoined, and then the papillæ of the Tongue have a purplish cast.

certain sign is pain or uneasiness uniformly after meals, which increases as the disorder goes on, and which is at length accompanied by general wasting, and an acceleration of the pulse, with pallidity of the skin and slow fever. The temper, too, is more easily ruffled than natural, or the spirits depressed. If a doubt exist as to the nature of the disorder, it may generally be removed by the exhibition of a diffusible stimulus, which always increases the uneasiness in the Stomach, if Chronic Muco-Gastritis be present, so certainly does the system, in this case, resist or indicate the impropriety of the stimulant treatment. Now that this treatment is so prevalent, from the remains of a vague and erroneous philosophy respecting dyspepsia, the young practitioner would do well to recollect the test already named, which may be safely relied upon in almost all dubious cases; and, on the other hand, as some modern pathologists press the doctrine of Inflammation beyond its legitimate bearing, it is equally needful to be guarded on that point, lest evacuations should be used where stimulants are demanded.

In fact, there is a painful affection of the Stomach, which is not inflammatory, and which is relieved by stimulants. It mostly attacks those who have suffered much from anxiety, or who have been considerably fatigued or exhausted. But it may arise in robust persons, from any article of diet very indigestible, or from a complicated meal. In this affection the pain is usually severe, without the least degree of fever, and it is accompanied by feelings of distention, weight, and fermentation. It is in general soon allayed by drinking hot water, or by the exhibition of laudanum, but the most rapidly and effectually by that of pure brandy. This kind of pain has long been distinguished in popular language by the term Spasm of the Stomach, or of Windy Colic when it exists in the bowels, and the value of alkohol is well known to the vulgar in such cases. All popular practices are founded in fact, and though they are apt to be misapplied on some occasions, yet it behoves the medical philosopher to attend to them; and unquestionably the one here mentioned is admirably fitted for a state which has been confounded with Inflammation, but which differs from it both in nature and treatment. What has been strangely denominated Gout in the Stomach or Bowels, will be found to depend either on mucous Inflammation in those organs, or on an irritation, not strictly inflammatory, which proceeds from crude and offending ingesta. This observation could be illustrated by many cases, but I merely advert to the subject now, by way of putting the inexperienced upon their guard respecting those unmeaning terms, which conceal the truth, and serve as a frame-work for a tissue of false hypotheses.

A sort of neuralgia of the Stomach sometimes is produced in young women who, being alarmed lest they should grow too fat, do not satisfy the appetite by a sufficiently large supply of food. The Stomach becomes very uneasy and irritable, and the body wastes. Sometimes this affection of the Stomach becomes really inflammatory, the Inflammation spreading, under a chronic form, to the mucous membrane of the bowels. If such cases should advance, they are very apt, ultimately, to be complicated with a tubercular condition both of the lungs and mesenteric glands.

Organic diseases of the heart are not unfrequently associated with Chronic Inflammation of the mucous coat of the Stomach, especially towards their termination. This was particularly the case in an aged nobleman, who died last summer, attended by Dr. Maton, Dr. Holland, and myself; for, on examination, several of the follicles were in a state of ulceration, and the whole membrane intensely injected. In such instances, preternatural sensibility of the Stomach, with nausea, retching, and vomiting, together with the crimson tongue, mark the nature of the ventricular disorder. If ulceration exist on the Mucous surface of the Stomach to any extent, patches or points of pus may now and then be discovered in the matter vomited, and these are mostly mixed with a glary tough mucus, or streaked with blood. In the advanced stage of Chronic Muco-Gastritis, patients sometimes vomit considerably more fluid than had been drunk, and this is most liable to happen in those cases where the inner coat of the Stomach is blanched and soft, which occasionally occurs in truly inflammatory cases.

The Serous and Mucous membrane of the Stomach is sometimes simultaneously inflamed, and this is the more liable to happen when any acrid substance has been swallowed. Some time ago, an instance of this nature fell under my observation which arose in a female, who took, by mistake, a large quantity of the crude potash of commerce, supposing at the time that it was Epsom salts. In such examples, there is a *combination* of the leading symptoms, which indicate Serous and Mucous Inflammation of the Stomach, and an attention to that circumstance will enable the medical attendant to form a tolerably correct opinion.

The distinction which was formerly made between the stage of Excitement and the stage of Collapse in cases of Serous Inflammation, does not palpably obtain where certain acrid poisons have been taken, for though there may be both Mucous and Serous Inflammation existing as a consequence, yet that Inflammation is accompanied by an universal shock and relaxation in the worst cases, as might be exemplified in those following over doses of Colchicum, which, to use the language of Orfila, is then an acrid narcotic, and creates a sudden and extensive inflammation of the mucous membrane of the primæ viæ, with a cold skin, thready pulse, and weak respiration. It is still, unfortunately, the custom among many practitioners, to use drastic purges in Inflammation of the bowels accompanied by constipation, which greatly aggravate the symptoms, and most frequently hurry the patient to the grave. This is prescribing for the symptom instead of the cause—a common and often a mortal mistake. Where croton oil had been freely exhibited, the collapse came on rapidly in some cases, and, upon examination after death, both the Mucous and Serous membrane of the Stomach and Intestines was inflamed to an extraordinary degree and extent.

The foregoing descriptions relate to Inflammation seated solely in the Serous and Mucous membrane of the Stomach; and this method of selecting portions of an Organ is necessary in order to present clear conceptions of each particular Inflammation. For want of such an arrangement, some of the Continental writers have given very complicated accounts of Gastritis, and ascribed symptoms to that complaint which belong to an affection of the brain, bronchial, and intestinal lining, and which chanced to be co-existent with the gastric irritation. At the same time it should always be borne in mind, that though Sero-Gastritis, or Muco-Gastritis, may and sometimes do take place without any other disorder, yet that they are not unfrequently mixed up with other and even remote Inflammations, more especially in those febrile affections which arise from what have been named Specific Occasions, in the Preliminary Remarks.

When Gastritis exists in conjunction with Specific Bronchitis and Arachnitis, the functions of the brain become much disturbed, and the whole aspect of the disorder unequivocally typhous; but when simple Gastritis alone exists, and arises from a Common occasion, the mind is wonderfully collected and serene within a short time of death—and the same remark is applicable to simple Sero-Enteritis and simple Muco-Enteritis. An attention to the assemblage of the symptoms will always show whether such Inflammations be simple or complicated, and, if complicated, the uneasy sensations and disturbed functions will easily lead the pathological observer to the discovery of the seat, and nature of the other conjoined affections.

DISSOLUTION AND PERFORATION OF THE STOMACH.

John Hunter occasionally found the great arch of the Stomach dissolved and perforated, and he concluded, that this phenomenon arose from the action of the Gastric juice *after* death. But if the operation of the Gastric juice after death was the cause, this appearance would surely be one of the most frequent in Morbid Anatomy; whereas it is notoriously very rare. Besides, in all the instances of this description which I have seen, the most unequivocal signs of disease existed for some time before death. In those cases, which occurred in adults, a sudden and severe pain arose, with vomiting, as if the patient had taken an acrid poison, and the fatal stage of sinking took place within forty-eight hours from the attack ; but the infant, whose Stomach is represented in the fourth Plate of the first Fasciculus, lived about seven days after the violent seizure, having been previously weaned, and weakly, from the history of its mother. The dissolution of the Stomach was announced by sudden and severe fits of crying, attended by a distressing sickness, and retraction of the lower limbs towards the abdomen. The Epigastrium was hot—the integuments of the belly hard—the pulse quick—and the respiration anxious. Diarrhœa supervened—the face gradually assumed the hippocratic character, and the extremities became cold. Such were the leading symptoms in the other cases which happened in my practice after weaning, all having been more protracted than those of the adults. It is not my intention to deny, that the Gastric juice may dissolve the Stomach now and then after death ; but, in the preceding cases, disease certainly existed in that organ, and was apparently the cause of the dissolution. If it be asked, what was the nature of that disease, I answer, that I do not know. The Mucous membrane is sometimes attenuated and even destroyed by Inflammation, but occasionally similar changes take place from a process, seemingly, not inflammatory ; and, as in the fore-mentioned cases of dissolution, the usual traces of ordinary inflammation were not present, it is not logical to refer the effect to that cause. It may be, however, that some change does take place in the mucous texture, or in the blood, by which the secretion is so altered as to act destructively upon the Stomach during life ; but, as there is no end to conjecture where observations are too imperfect for legitimate deductions, I must leave this point of pathology to the consideration of succeeding inquirers.

The Stomach is occasionally perforated by common, and sometimes by cancerous ulceration, instances of which have come within my own knowledge ; and, though I have seen no case of a rent or rupture of that organ, yet one recently occurred to a friend, where great distention and attenuation had previously existed without ulceration. When perforation takes place from ulceration, it mostly gives rise to an excruciating pain, followed by an irregular hardness and contraction of the abdominal integuments, with symptoms of Acute peritonitis ; but as such perforations, from previous Mucous Inflammation are much more frequent in the Intestines than Stomach, I shall give the results of my experience on that subject in a subsequent number of this Work.

OF THE MORBID ANATOMY

OF

THE STOMACH.

Morbid Anatomy shows, that four conditions are the most prolific causes of disease in the human body, namely, Inflammation, Tubercle, Fungus, and Scirrhus. Some of the most remarkable effects of simple Inflammation have been displayed in the First Fasciculus, and these are further illustrated in one of the plates of this Number, as far as the appearances of common ulceration are concerned, and that ill-conditioned one which has been denominated phagedenic, by way of distinction.

With respect to Tubercle, it hardly ever attacks the Stomach, except it be now and then seen in the Serous membrane, where the peritoneum has been studded, by that deposition, in points. But Fungus, and Scirrhus are not uncommon in this country, sometimes seated about the Œsophagus, and sometimes about the Stomach, and not unfrequently, either the one or the other is found in both these parts in the same case. Simple Inflammation, however, by which is meant Inflammation uncombined with any of the above mentioned peculiar Formations, sometimes attacks the Œsophagus, and may lead, like Fungus and Scirrhus, to Stricture there; though it must be confessed, that such an occurrence far more often depends on those adventitious Structures, than upon the thickening which results from simple Inflammation, and which is displayed in one of the drawings made from a recently fatal case. The very few cases of Stricture of the Œsophagus which I have seen to depend upon Inflammation alone were not seated about the Cardia, but higher up in that canal; whereas in those which have fallen under my observation as the effects of Fungus or Scirrhus, the Stricture was mostly in the vicinity of the Cardia. In three or four cases, I have known less or more obstruction to arise about the Pylorus, from the thickening of its cellular membrane through simple Inflammation; but what is usually called Stricture of the Pylorus depends upon the presence of Fungus or Scirrhus, and my own dissections would authorise me to conclude, that Fungus of the Cardia, Stomach, and Pylorus occurs quite as frequently as Scirrhus in those situations—a fact which has not, perhaps, been sufficiently attended to by authors who have expressly written on Morbid Anatomy.

Both Fungus and Scirrhus seemingly attack almost every variety of structure, yet from the attachment and derangement which each effects in the surrounding parts, during their growth and destruction, it is often difficult, and even impossible to fix upon the precise texture in which the disease had commenced. But indisputably the cellular connecting membrane of organs is the most common seat of both these extraneous productions, especially with reference to the Œsophagus and Stomach; though some minute examinations would induce me to infer, contrary to the opinion of some of my friends, that the true Fungus Encephaloides occasionally springs from a mucous surface, not only of these, but of other organs.

The great alteration of Structure, then, and consequently of office, in the Œsophagus and Stomach results from Inflammation, Fungus, or Scirrhus, and this remark is singularly applicable to what is called Stricture, which sometimes, however, has a truly spasmodic character in the Œsophagus, as shall be shown in the detail of the Symptoms connected with those morbid appearances, which the plates of this Fasciculus are intended to elucidate.

PLATE VI.

The first Drawing is designed to represent common ulceration of the Stomach, and the second an ill-conditioned or phagedenic ulceration, which now and then takes place, though very rarely in comparison to the former.

FIG. I.

a. The Serous membrane of the duodenum.

b b. The valvulæ conniventes.

c. The pylorus.

d d. Enlarged mucous follicles with slight solution of their apixes.

e. Two extensive ulcerations in the mucous follicles.

f. Corrugated state of the mucous texture of the Stomach from contraction of the muscular coat.

g. Clusters of mucous follicles in a state of incipient ulceration.

FIG. II.

a. The Serous membrane of the Stomach.

b. Corrugated state of the Mucous membrane, with slight abrasion of its surface.

c c c. The ill-conditioned and deep ulcerations, with ragged edges, encircled by an indurated and livid base.

d. The indurated and livid base.

e. The valvulæ conniventes.

This species of ulceration, which is so seldom met with, is partially covered, in a recent state, by a thin, acrid, and semi-inspissated dark matter, having an offensive odour.

Plate 6.

Fig 1.

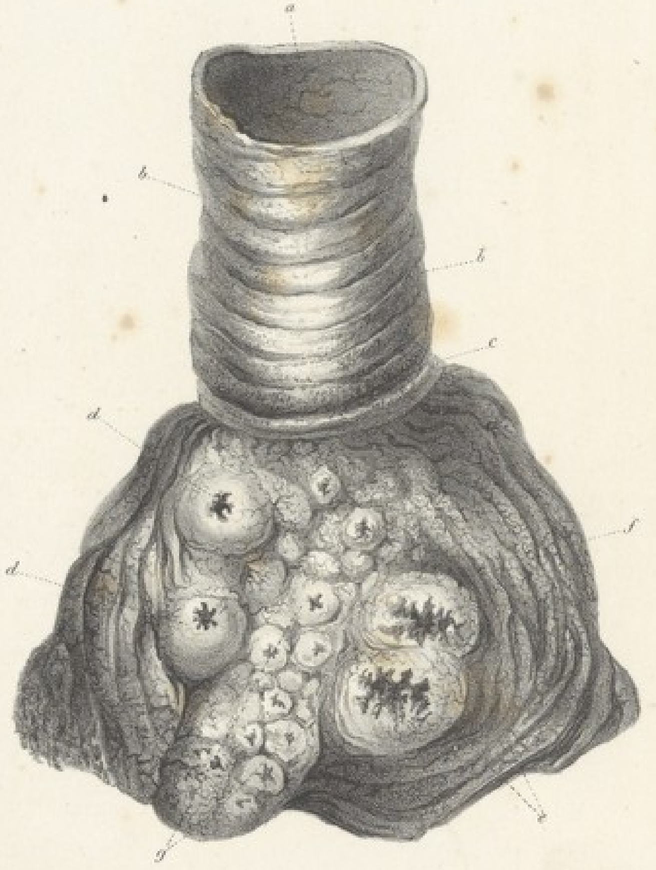
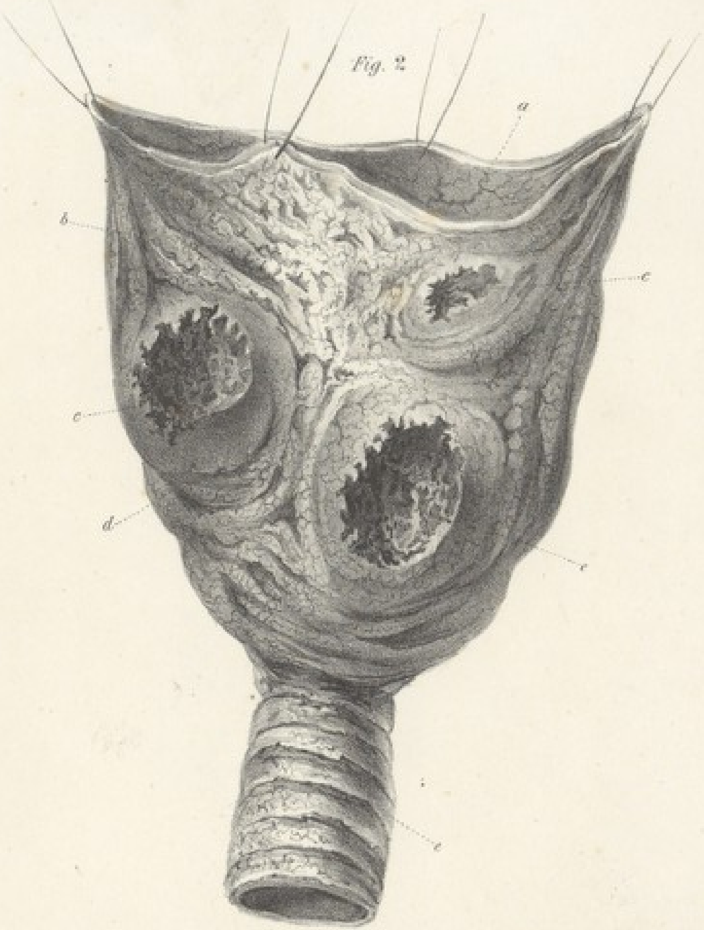


Fig. 2



Drawn by W. P. Cocks.

Printed by Engelmann & Co.

On Stone by Thos Fairland

London. Published by Baldwin & Cradock, May 1828.

Plate 7.

Fig 1.

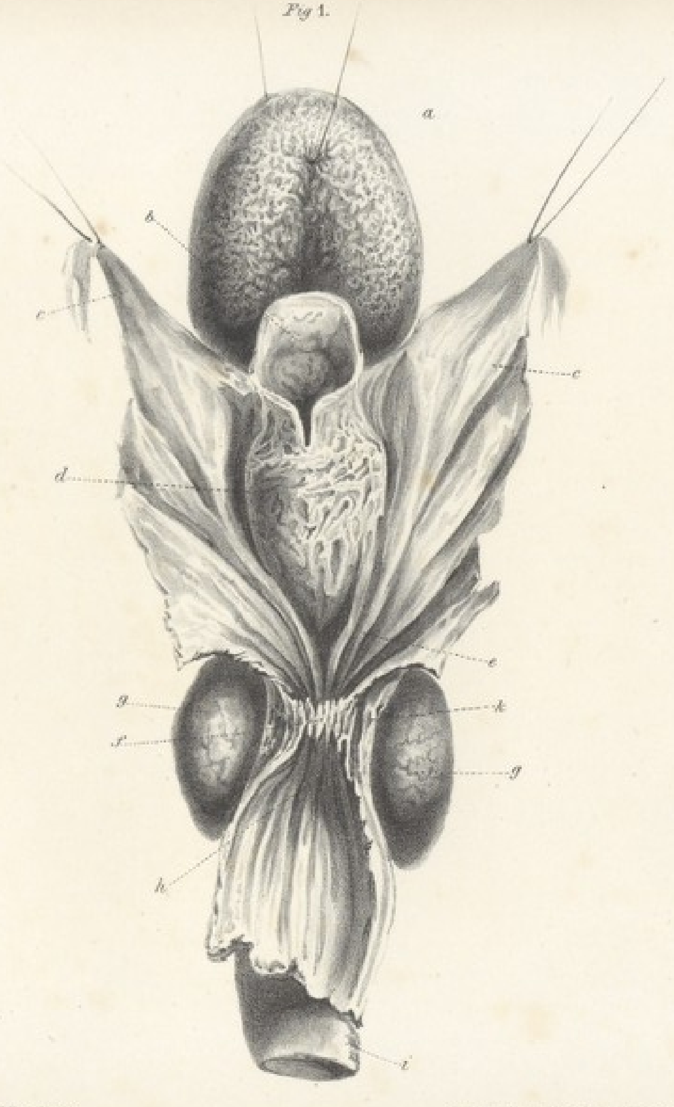


Fig. 2

W. P. Cocks del.

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PLATE VII.

Represents Stricture of the Œsophagus, arising in one case from Inflammation, in the other from Scirrhus.

FIG. I.

Stricture of the Œsophagus from simple Inflammation, which was seated just below the bulb of the larynx. It took place in a gentleman upwards of forty years of age, and produced all the protracted suffering of a gradually formed and permanent Stricture.

a. The Tongue.

b. The Epiglottis.

c c. Part of the Pharynx.

d. The Larynx.

e. Puckering of the Mucous membrane in and about the Stricture formed by corrugation and condensation of the mucous, cellular, and muscular textures of the part.

g g. The Thyroid gland.

h. A portion of the Œsophagus below the Stricture.

i. The Trachea.

k. Condensed state of the cellular membrane, external to the mucous one.

FIG. II.

An extensive Contraction of the Caliber of the Œsophagus, from the true fibro-cartilaginous Scirrhus of the cellular membrane, nearly throughout the whole course of the tube.

a. The Uvula.

b. The Tongue.

c. The Epiglottis.

d. Corrugated state of the mucous membrane on the posterior part of the Larynx, with slight erosion.

e. The fibro-cartilaginous deposition, called Scirrhus, in the cellular membrane between the various tunics of the Œsophagus.

f. The mucous membrane.

g. That membrane puckered.

h. The Thyroid gland.

i. The muscular tunic of the Œsophagus which, in this instance, contrary to what generally happens in Scirrhus, was not preternaturally thickened. When softening of the Scirrhous matter takes place, the muscular coat may suffer in the destructive process, and in that way appear attenuated. The thickening of the muscular texture is chiefly occasioned by that of the cellular one, which knits the fibres of the former together.

Plate 8.

Wm P. Cocks delt

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PLATE VIII.

SKETCHED from a fine Specimen of Fungus Encephaloides, which surrounded the Cardia, and which was situated in the cellular membrane, between the external serous and muscular coats, producing Stricture at the Cardiac extremity of the Stomach.

a. The mucous membrane of the Œsophagus.
b. A distinct lobe of the Encephaloid.
c. The tortuous veins rambling over its surface.
d. A Section of the Tumour, showing its lobulated structure.
e. The serous covering of the Tumour.
f. The puckered mucous membrane within the embrace of the Tumour.
g. The cellular membrane which divides the Tumour into various lobes.
h. The Cardiac extremity of the Stomach.

This case existed in an aged person, and sometime ago I saw one which took place under similar circumstances, and proved fatal, in like manner, by producing Stricture about the Cardia. But these cases proved fatal before any degree of softening took place in the Tumour, and in both, too, no similar formation was found in any other part of the body—an exception to the general character of this disease.

The Encephaloid is not always composed of several lobes as shown in this and the following Plate, neither does it, when cut, always exhibit so uniform a surface. Sometimes the Tumour is contained in a single capsule, and sometimes its divided surfaces have a granular appearance, as if the specific deposition had taken place in points.

PLATE VIII.

SKETCHED from a fine Specimen of Fungous Encephaloid, which surrounded the Cardia, and which was situated in the cellular membrane, between the external serous and muscular coats, producing Stricture at the Cardiac extremity of the Stomach.

a. The mucous membrane of the Œsophagus.
b. A distinct lobe of the Encephaloid.
c. The tortuous veins ramifying over its surface.
d. A Section of the Tumour, showing its lobulated structure.
e. The serous covering of the Tumour.
f. The puckered mucous membrane round the base of the Tumour.
g. The cellular membrane, which divides the Tumour into various lobes.
h. The Cardiac extremity of the Stomach.

This case existed in an aged person, and is the only one I have seen which took place under similar circumstances. [illegible] was seated, by producing stricture about the Cardia. That [illegible] proved fatal before any degree of softening took place in the Tumour, and [illegible] no other [illegible] was found in any other part of the body, an [illegible] general condition of this disease.

The Encephaloid is not always composed of rounded lobes as shown in this and the following Plate, neither does it, when cut, always exhibit so uniform a surface. Sometimes the Tumour is contained in a single capsule, and sometimes, its divided surface has a granular appearance, as if the morbid deposition had taken place in points.

Plate 9

Fig. 1

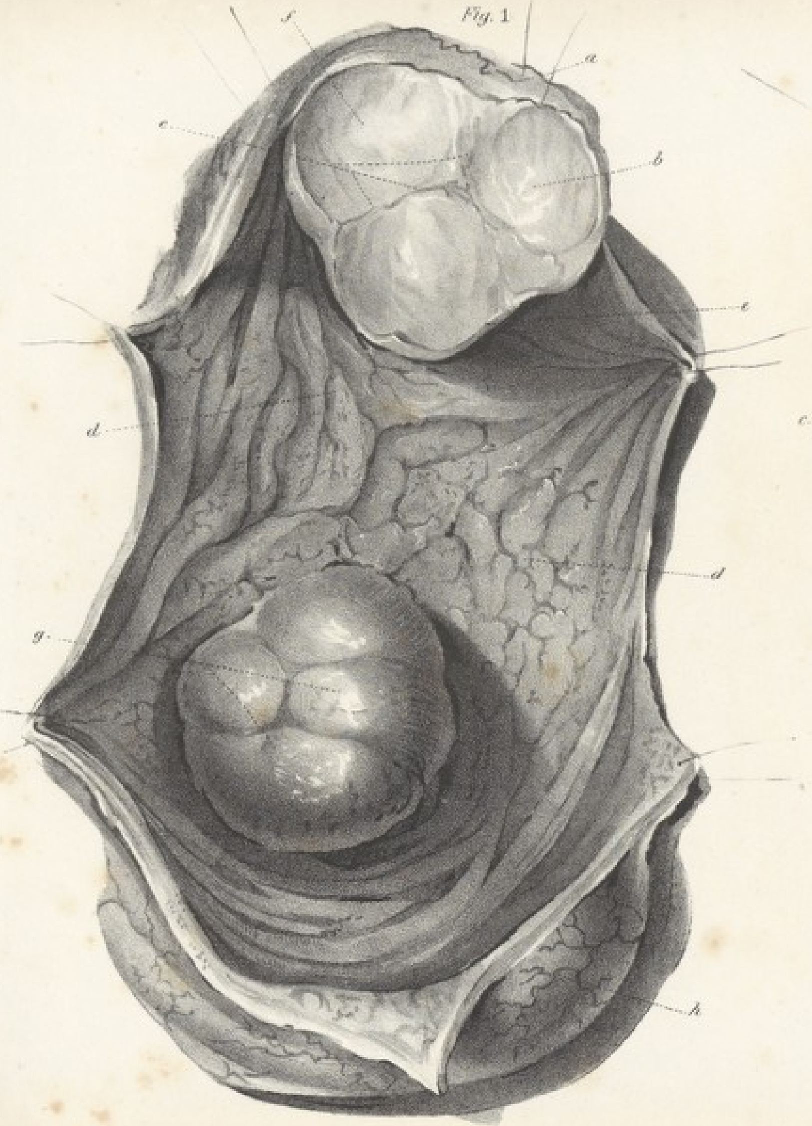

Fig. 2

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PLATE IX.

Sections of the Stomach are here represented in two Figures, in the first of which the appearances of the Encephaloid Tumour are exhibited in its state of consistence; and, in the second, those in its state of solution.

FIG. I.

a. The mucous membrane forming the outer covering of the Tumour.

b. A Section of the Tumour showing its internal structure.

c. Interstitial cellular membrane forming a distinct Capsule for every lobe, each Capsule being bountifully supplied with blood vessels.

d. The Corrugated condition of the mucous membrane.

e. The proper Capsule of the whole Tumour, to which the mucous membrane is firmly attached.

f. The medullary or brain-like contents of the Tumour.

g. A complete Tumour formed of several lobes.

h. The varicose and tortuous state of the Veins in the serous membrane of the Stomach.

FIG. II.

a. The serous membrane of the Stomach.

b. The mucous membrane of the Stomach.

c. The Encephaloid Tumour broken up by decomposition.

d. The vessels hanging loose or unattached.

e e. Two Encephaloid Tumours in a softened state.

f. The valvulæ conniventes.

g. The serous membrane of the Duodenum.

When such an Encephaloid Tumour has been macerated, and put up as a preparation, the softened portion resembles the loose shreds or edges of fringe, and, if these be examined, they will be found part of the minute vessels which had composed, and secreted the Encephaloid matter.

[illegible] TO ACCOMPANY THE PLATES.

PLATE [illegible]

[illegible] of the Stomach, and [illegible] represented [illegible] the appearance of the [illegible] and, in the section [illegible]

FIG. [illegible]

a. The serous membrane forming the outer [illegible]

b. A Section of the Tumour showing [illegible]

c. Interstitial cellular membrane forming a [illegible] Capsule being beautifully supplied with blood [illegible]

d. The Corrugated condition of the [illegible]

e. The proper Capsule of the whole [illegible] which the [illegible] is firmly attached.

f. The medullary or brain-like contents of the Tumour.

g. A small Tumour [illegible] several [illegible]

h. The reddened and [illegible] state of the [illegible] of the Stomach.

FIG. [illegible]

[illegible]

[illegible] the Duodenum.

[illegible] I have [illegible] they will [illegible] the [illegible]

Plate 10.

Fig. 1.

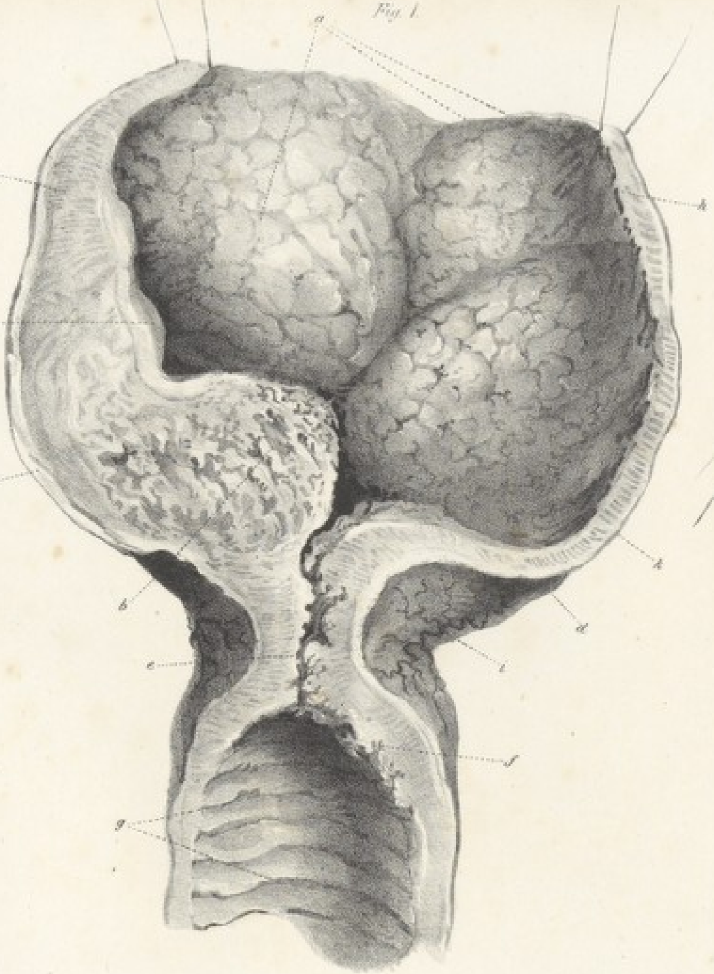
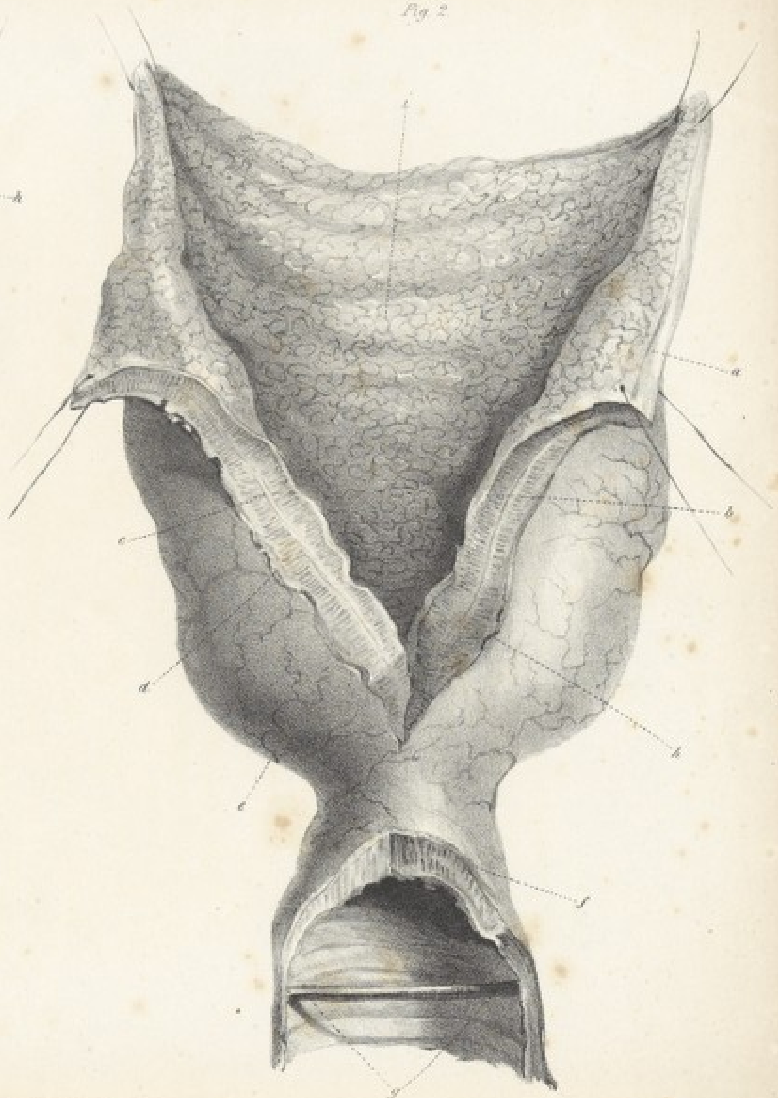


Fig. 2.



W. S. Cocks delt.

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PLATE X.

Representation of the common fibro-cartilaginous Scirrhus, and also the more rare variety of that disease, which may be characterised by the term Scaly Scirrhus.

FIG. I.

A considerable induration and contraction of the Stomach from fibro-cartilaginous Scirrhus seated in the cellular connecting membrane of that organ, with a permanent Stricture of the Pylorus, and a partial softening of some portions of the Scirrhous deposition.

a a. Irregular and indurated state of the Stomach.
b. The Scirrhous matter in a softened condition.
c. The thickened state of the mucous membrane.
d. Scirrhous deposition in the cellular membrane between the mucous and muscular tunics.
e. The permanent Stricture of the Pylorus from the Scirrhous deposition.
f. Softening of the duodenal extremity of the Stomach.
g. The valvulæ conniventes.
h. The muscular fibres compressed close to the serous coat of the Stomach.
i. Varicose and tortuous state of the Veins.
k. The serous membrane of the Stomach.

FIG. II.

A specimen of the Scaly Scirrhus of the Stomach, complicated with the fibro-cartilaginous Scirrhus of a portion of its Parietes, and also of the upper part of the Duodenum.

a. The inner surface of the Stomach.
b. The fibro-cartilaginous Scirrhus between the muscular and mucous membranes.
c. Condensed muscular fibres.
d. The Serous Membrane of the Stomach.
e. The varicose veins.
f. The fibro-cartilaginous state of the Duodenum.
g. The valvulæ conniventes.
h. The fibro-cartilaginous matter between the muscular and serous tunics.
i. The scaly Scirrhus, occupying the place of the mucous membrane destroyed in the progress of that peculiar deposition, which, under this form, sometimes resembles, in point of arrangement, the scales of fish or of old armour, and at other times is not unlike the rough and irregular surface of the head of the common cauliflower.

SYMPTOMS.

STRICTURE FROM SIMPLE INFLAMMATION OF THE ŒSOPHAGUS.

THIS form of Stricture is rare. It may exist either under the pharynx, or near the Cardia, and is preceded by signs of irritation of the Mucous membrane of the Stomach, such as flatulence, acidity, occasional uneasiness in the epigastrium, with redness of the end and margin of the tongue, and prominence of its papillæ In instances of this sort, more or less redness is discoverable about the fauces and pharynx; for, though the irritation commonly begins in the inner lining of the Stomach, it is a striking fact, that Mucous membranes are apt to suffer secondarily toward their extremities. Hence the frequency of sympathetic Inflammation about the fauces and the pharynx of those whose Stomach is out of order from Mucous irritation; and this view of the subject is so important, that little impression can be made in Chronic Inflammation of those parts, unless the original remote disorder be constantly regarded in the plan of treatment. If the Inflammation arise under the pharynx, some degree of pain and impediment in swallowing exist there, with an increased secretion from the throat; and the increase or diminution of these symptoms mark the advancement or subsidence of the Inflammation, together with the declension or improvement of the general health. It must be borne in mind, that Chronic Inflammation about the epiglottis, rima glottidis, and pharynx gives rise to great uneasiness in the act of deglutition; but such cases will be discriminated, first, by the hoarseness, peculiar cough, and the other signs which mark a laryngeal affection; and, secondly, by the sense of suffocation produced by every attempt to swallow any thing irritating the epiglottis, which then frequently performs its office imperfectly. During the progress of Stricture of the Œsophagus from Inflammation, it is accompanied by a sense of heat and uneasiness in the posterior part of the mouth, and also by difficulty of swallowing, a copious secretion of saliva, slight cough, and ultimately some degree of dyspnœa. If ulceration take place, almost all the symptoms are aggravated, and in the attacks of nausea or retching, a tenacious mucus is ejected, sometimes mixed with pus or blood. Ulceration of the Œsophagus occasionally proves fatal by excessive hemorrhage, and I have known the same event happen from Ulceration of the Stomach. But if the patient should not be thus suddenly carried off, great emaciation takes place, with fever of a hectic type, and a little before death, there is often feebleness, and even aberration of mind, as is seen in most instances where patients die from inanition.

In regard to the spasmodic stricture of the Œsophagus, it generally comes on and goes off suddenly, so as fully to reveal its character, especially when seated below the pharynx. It is most common in enervated men of the nervous temperament, or in females who are subject to hysterical affections.

In some dissections, I have found the Cardia reddened, thickened, and softened, apparently from Chronic Inflammation; and, in tracing the history of the cases backward, it appeared that the patients had a sense of uneasiness and obstruction in that quarter during the passage of solids or liquids; but then I have known similar symptoms take place, even with a described impediment to the transit of the food into the Stomach, and yet nothing of a morbid nature existed about the Cardia to account for the symptoms. The majority of such cases happened in females, who died of diseases having little or no connexion with the textures of the Stomach.

It may be here noticed, that Stricture, or rather a limited narrowness, of the Œsophagus occasionally depends on original formation. In this congenital form, usually seated opposite to the larynx, there is constantly some difficulty or delay of swallowing, but not sufficient to prevent deglutition, and in other respects the patient enjoys good health.

STRICTURE ABOUT THE CARDIA FROM FUNGUS OR SCIRRHUS.

Unquestionably the cause of Stricture about the Cardia mostly arises either from Fungus or Scirrhus, and I know of no symptoms, by which the one can, with certainty, be distinguished from the other. But it should not be forgotten, that Scirrhus most frequently occurs after forty years of age, and that Fungus may attack at any period of life. Besides, as far as I have seen, the progress of Fungus is much more rapid, in general, than the progress of Scirrhus, which may be some guide in the diagnosis; but we cannot be certain, unless some of the Encephaloid matter should be ejected, during the softening and destruction of the Tumour. That, however, is not a very common occurrence; for, indeed, the patient often dies before the perfect destruction of the Tumour in that part. The symptoms which most unequivocally indicate Fungus or Scirrhus about the Cardia are, uneasiness there, impediment and pain in the deglutition of food, as if it rested or stuck at that point, and a ropy secretion from the fauces, with occasional nausea, and retching. Regurgitation of solids or liquids is not unfrequent during or after meals. In the course of either complaint, the surface becomes of a sallow, sickly hue, and has a withered aspect and feel; while the flesh wastes in proportion to the progress of the disease, the skin at last becoming dry, loose, and wrinkled, through the absorption of fat from the subjacent cellular membrane. It may be here remarked, that less emaciation generally attends Fungus than Scirrhus, supposing each exist separately and independently of the other. This circumstance may proceed partly, perhaps, from the more rapid progress of Fungus; and when this state supervenes or attends Scirrhus, the case usually terminates more speedily than when Scirrhus occurs alone.

The matter ejected from the Œsophagus in the first stage of Scirrhus very often closely resembles a mixture of arrow root in hot water, and even, when softening takes place, it frequently has a similar appearance; but where ulceration advances, it is apt, occasionally, to be blended with a bloody or ichorous discharge, or with coagulated blood itself, while lancinating pains succeed, great distress, fever, colliquative sweats, and much emaciation.

STRICTURE ABOUT THE PYLORUS FROM FUNGUS OR SCIRRHUS.

The symptoms of Stricture about the Pylorus, either from Fungus or from Scirrhus, are extremely obscure for some time, but particularly when dependent upon Scirrhus, for then they form more insidiously, and advance more slowly, than is generally the case in Fungus seated in that portion of the Stomach. One of the first signs is a feeling of uneasiness in the direction of the Pylorus, which is the most apt to be felt after bodily fatigue, during anxiety, or after an unusually full or indigestible meal. The common train of dyspeptic suffering follows, namely, flatulence, irritation, sense of fullness or weight in the epigastric region, with depression of spirits or fretfulness of temper, and the complexion gradually acquires the cast of sickliness, and the patient loses flesh as well as colour. At length, on any extraordinary exertion, either of body or mind, nausea, retching, or vomiting unexpectedly takes place, and the quantity of fluid matter ejected frequently exceeds that which had been taken; but this irritability of the stomach is most liable to be displayed when, the mind being over-wrought, or the body fatigued, some solid or liquid material shall offend the stomach. At a further stage, the patient feels what he calls a forcing pain, or pain and pressure in the region of the Pylorus, as if the contents of the stomach met with a resistance at that point, when the organ acted to propel them into the intestines. This symptom generally occurs an hour or two after a meal, and is one of the most certain indications of Stricture of the Pylorus, increasing as the disease advances, together with the irritability of the stomach, and the loss of flesh and strength. In my own practice, I have only met with one exception to this remark, and in that case the patient never complained of urgent pain, never vomited in the course of the disease, but then he instinctively took extremely small quantities of food at once, and that of the blandest description. Solid animal food commonly excites the most uneasiness, and is often followed by eructations of an offensive taste, rolling of wind as if confined in the Stomach, with a sense of rising or choaking in the throat. On some occasions I have known macerated shreds of mutton or beef brought up several days after a meal of one or the other. Lassitude and languor increase in such examples, and the heart generally becoming much attenuated, the pulse is very feeble, and sometimes the patient is liable to feelings of faintness, more especially on exertion of the body. In Scirrhus, the matter which comes from the Stomach is generally like arrow root mixed with hot water, or ropy like an infusion of lint seed, whereas in Fungus it commonly has a more curdly character—an appearance which may sometimes assist in the discrimination of the one state from the other; but in both the ejection of a glary or grumous liquid may considerably exceed the quantity of fluid which had been drunk. Sometimes, however, Fungus, but particularly Scirrhus, may exist, about the Pylorus or central portions of the Stomach for two or three months before vomiting takes place—a fact which should be remembered in the investigation of the seat of such affections.

In all the cases which I have seen of Stricture of the Pylorus, the emaciation was finally very great. Napoleon Buonaparte seems to have died of this disease, and yet the body was found loaded by fat—an exception, certainly, to a general law of nature. From his own account, he was hereditarily disposed to Scirrhus, on his father's side; and it is probable, that the germ of this and other extraneous growths is often latently sown in the original conformation of the body, and only developed in after-life by the operation of certain exciting causes. Among these, as far as I have observed, anxiety of mind is by far the most influential, apparently, in the production of Scirrhus. Most of the ancient philosophers lived to an extreme old age, their pursuits being so benevolent and their thoughts so innocent as necessarily to lead to mental serenity; but Napoleon was not a philosopher, and though he attempted to govern the whole civilized world, had so little command over himself, that he allowed his mind to be incessantly disturbed even by little things, especially towards the close of his career, and thus, probably, at last converted an hereditary tendency into a destructive disease.

FUNGUS OR SCIRRHUS OF THE PARIETES OF THE STOMACH, BETWEEN THE CARDIA AND THE PYLORUS.

There are two modes of investigating the seat and nature of maladies. The one may be called the negative, and the other the positive mode; for, in our inquiries, we frequently have to find out what a disease is *not*, before we can make an approach to ascertain what it really *is*, in a pathological sense. Thus, if we found the functions of the Stomach more or less permanently disturbed, and could not satisfactorily refer that disturbance to an Increased Determination or simple Inflammation of the mucous surface of that organ, our next inquiry would be to discover whether it depended on a Fungus or Scirrhus about the Cardia or Pylorus, and if the signs of such affections in such quarters were absent, then we should naturally suspect the existence of the one or other of these Formations somewhere between the Cardiac and Pyloric extremities.

It has been said, that when the Stomach is universally the seat of organic derangement, that it is less irritable than when a small portion of it only is affected; and I should be disposed to say that this is generally the fact when the central parts of the Stomach are alone attacked—at least nausea, retching, or vomiting, has been less urgent in some of such instances than when the Cardia or Pylorus were first and most decidedly diseased throughout the case. When Fungus or Scirrhus attacks the central parts of the Stomach, the most pathognomonic Symptom is pain after any thing has been eaten or drunk, the history of the case not corresponding to that of Simple Inflammation of the Mucous texture, in other respects. For instance, the tongue is not so preternaturally red in general, but surprisingly natural for the most part, considering the permanency of the character, and the progressively deep impressions of the disease. The appetite too, is, in general, not prostrate as in Chronic Muco-Gastritis, for, on the contrary, the patient usually longs for this or that kind of food, but his taste is so capricious, that if the practitioner regulated it to-day, the restriction is sure to be violated to-morrow, or shortly afterwards. The pulse is not above par in power or in frequency, as in Chronic Muco-Gastritis, for a considerable period from the accession of the complaint: indeed, in the majority of examples it only becomes so on the solution or breaking up of Fungus or Scirrhus, when it frequently happens, that the circulation is disturbed by a sort of febrile commotion. From first to last there is a wasting of the flesh, and a loss of colour, with occasional attacks of nausea, retching, or vomiting, particularly on exercise, over-exertion, or indulgence of appetite; and now and then a tenacious fluid is thrown from the Stomach, which, in the last stage of softening, is usually mixed with a dark, acrid, or offensive matter, as before described. An examination of the epigastrium, by the fingers, may sometimes detect hardness and swelling, so as to lead to the presumption, that organic disease exists in the Stomach; but such irregularities, even when present, are not always tangible through the integuments, and therefore we should rather rely, conjointly, upon the past history, and the present concourse of uneasy feelings, and interrupted functions, with reference to the Stomach. Upon the whole, I should say, from my own experience, that more pain generally attends Scirrhus than Fungus of this part, particularly towards the conclusion; and at that time a sensation of frequent faintness is not uncommon, with a tumultuous feeling or oppression about the heart, as often happens in affections of the Pylorus. In almost all great organic derangements of this nature seated in the Stomach, a distinct and even strong pulsation is felt in the epigastrium, a symptom which, perhaps, may arise from the pressure of the morbid mass upon the cœliac artery or abdominal aorta; but whatever may be the explanation of this sign, it will be found one of the most constant in the progress or towards the conclusion of Scirrhus or Fungus of the Stomach, and wherever it exists, in conjunction with a sallow surface, irritability, or other uneasiness of the Stomach, and loss of flesh, Fungus or Scirrhus of that organ may be fairly suspected. Of course the medical attendant will not judge from *one* symptom exclusively, but from the *combination* of symptoms, as pulsation of the epigastrium may depend upon a functional or an organic affection of the heart, upon aneurism of the abdominal aorta, upon an impaction of scybala in the colon, or other causes. In like manner, too, the practitioner will not infer organic derangements in the Œsophagus or Stomach simply from that increased secretion, or sort of water-brash from the fauces, which so frequently attends them more or less, because that symptom very often accompanies local or general disturbances of the mucous texture uncombined with any organic derangement. The best rule, in all cases of doubt or difficulty, is that before mentioned, namely, a careful consideration of the *combination* of the symptoms.

As a further guide it may be noticed, that in Fungus or Scirrhus of the Stomach, patients are, in general, most comfortable and cheerful when they first rise in the morning, where food has not been taken during the night; but shortly after breakfast, pain usually begins, extending from the pit of the Stomach downwards and across. It is accompanied, too, by feelings of distention from wind, which seems to force itself in every direction, but meeting with obstruction, causes at length considerable suffering, which for the most part is only alleviated by eating or drinking something warm; and even then the respite is of short duration, the flatus again appearing to accumulate as rapidly as it had dispersed, and often creating a rumbling noise. On such occasions, a distressing pain is sometimes felt about the back near the right or left Scapula, with a strange sensation in the throat, frequent spittings, and, sometimes, lightness or giddiness in the head.

The medical attendant should always make a point of examining the external parts of the body accurately; for, if he should discover any Tumour there of the Fungous or Scirrhous description, it would aid him in the diagnosis; and in such examples, but particularly when they take place in females, I have repeatedly found external evidences, as lately happened, where the breast and stomach were simultaneously disorganized by Scirrhus. As far as regards the existence of Fungus or Scirrhus in different internal organs at the same time, such a complication will be most clearly deduced by a minute investigation and deliberate consideration of the symptoms in all their seats and bearings. Thus, for example, an old lady, the mother of a physician, had long complained of pain and difficulty of deglutition referred directly to the Cardia. These symptoms existed for some years, when she became liable to a pain after meals, about the large extremity of the stomach, which became more and more distressing, and had an obvious influence upon her general health. Subsequently the functions of the liver and bowels became disturbed; and, upon investigation, at my first visit, I found that the liver was not only enormously enlarged, but that several Tumours, some of the size of a small apple, were scattered over the surface of the large lobe. Here strong suspicions naturally arose of the existence of Scirrhus at the Cardia and in the Stomach, probably combined with the Fungus Encephaloides of the liver, and such was the fact; for, on examination of the body after death, both the Cardia and large extremity of the Stomach were Scirrhous and ulcerated, and the liver contained many of the Encephaloid Tumours, some of which were of an extraordinary size. This is one of the many cases which I could adduce to prove that Fungus occurs in the aged as well as the young, though it must be confessed, that true Scirrhus is a rare occurrence in the latter, while, on the other hand, nothing is more common than Tubercle at that period, and in the prime of life.

There is something forcibly striking in the expression of the countenance and colour of the skin in most great organic diseases. Thus, in Tubercular disease of the lungs and elsewhere, the lucid cornea becomes more glary and the conjunctiva more blanched and pearly than natural, with a softness and almost pensiveness of expression; while the face grows more and more sharp, and the surface acquires a much more delicate hue, as is exemplified in the hands, which are then remarkably white, the prominent veins wandering across them, like fine blue lines through pure marble. Again, the expression in Scirrhus considerably advanced, is that of more or less solicitude, and the skin commonly has a sallow tint, like that of the pale yellowish willow; whereas, the cast of the countenance is less materially affected in Fungus, and the skin has neither the delicacy attendant on Tubercle, nor the sallowness attendant on Scirrhus, but is often of a dull muddled white, almost resembling that of common tallow or painters' putty. It is indeed difficult, nay, impossible, to convey in words very precise descriptions of the varieties of expression and colour; but there is, nevertheless, some change about the face and skin which often, at first sight, leads an experienced eye to suspect the presence of deep visceral derangement. Yet every prudent man will not be guided by first impressions, but pause and accurately investigate all the particulars of the case, and then deliberately reflect upon them, in order to legitimately deduce a correct opinion. The intelligent pathologist will be especially on his guard not to confound the ventricular disturbance and sallowish aspect of the sedentary and studious dyspeptic with any organic disease of the Stomach; for, though in such persons the face be "sicklied o'er with the pale cast of thought," yet it is most frequently an indication merely of a disorder, which admits of a ready remedy, and which, even if continued under the same character, may not at all shorten life. In nosological and systematic works, Dyspepsia, Indigestion, or Disorder of the Digestive Organs, is considered as one affection; but the modern pathologist will not be deceived by such abstract terms, which in truth comprehend many and discrepant affections. The time is surely approaching, when names will no longer be imposed solely from a few prominent symptoms, without a strict reference to all the features of the case. The most constant of the symptoms in what has been, metaphysically, denominated Dyspepsia, are a furred tongue, flatulence of the Stomach, fretfulness of temper or depression of spirits. Now these may arise primarily from disorder or disease in the Stomach itself, or, secondarily, from disorder or disease in some other part of the body—for instance, from Increased Determination of the Mucous surface of the Stomach, Chronic Inflammation, Fungus, or Scirrhus of that viscus, and an attentive examination into their course and combinations will enable the medical attendant to form a shrewd opinion as to the exact nature of the cause; but, on the other hand, such symptoms may, and often do depend upon an affection of the brain, liver, bowels, or some other remote or adjacent part, and therefore it is expedient, nay, essentially necessary, to inquire most patiently into every case, that its true character and cause may, if possible, be satisfactorily ascertained. Many mistakes of opinion, and consequently of practice, originate in hasty generalizations, by which complaints essentially different are confounded under one name, because they have some symptoms in common; but such mistakes will be avoided by those who take at once minute and comprehensive views, for, in separating what is common from what is peculiar in cases, they will refer the symptoms more precisely to certain conditions, direct or indirect, of the affected organs.

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ON THE MORBID ANATOMY

OF THE

BOWELS.

My design in publishing these Fasciculi is, first, to classify the leading Affections of the Stomach, Bowels, and Liver, so as to present them in something like a natural order; secondly, to give Delineations and Explanations of the most important appearances in their Morbid Anatomy, as displayed in the various textures which compose those viscera; and, lastly, to connect the diseased condition of such textures with a Summary of the Symptoms, by which its existence may be most certainly recognised. In the two preceding Fasciculi it was shown, that Increased Determination, Inflammation, Fungus, and Scirrhus, were the most common and chief points in the Morbid Anatomy of the Stomach—an organ, however, which is occasionally liable to what might be termed nervous and anomalous disturbances; but as these leave no appreciable change in the solids, they will not be formally noticed here, but reserved for the Pathological part of the Essay, which will appear after the completion of the Anatomical Illustrations. In accordance to this plan, therefore, the present and subsequent Number will be appropriated to the Bowels—the one relating to the Serous, and the other to the Mucous Membrane.

Inflammation, Tubercle, Fungus, Scirrhus, and Melanosis, are all concerned in the Morbid Anatomy of the Bowels. Inflammation of the Serous membrane of the Stomach only occurs now and then, and is mostly conjoined with Mucous Inflammation of that Viscus; whereas, Inflammation of the Serous membrane of the Bowels is very frequent in this country, and is, in the majority of examples, unconnected with Inflammation of the Mucous texture. Fungus, and Scirrhus, on the contrary, often occur in the Stomach, but Tubercle is rarely found there. Again, Scirrhus and Fungus, but more especially Scirrhus, are very seldom met with, according to my observations, between the Duodenum and the Rectum. We hear now-a-days a great deal, not only about alimentary engorgement of the Duodenum, but structural derangement of that portion of the Intestines. But who, upon an examination of bodies after death, ever found any crudities in the Duodenum? Is it not invariably empty? And, as for structural derangement of the Duodenum, if we except its *occasional* connection with Fungus and Scirrhus of the Stomach, or with Simple Inflammation, it is less subject to disease, if I might speak from my own dissections, than any other portion of the Bowels. It is common, too, to read of Scirrhus of the Rectum, or Scirrho-contracted Rectum, but I have only seen two instances of genuine fibro-cartilaginous Scirrhus in that situation; the other examples, which seemed to be such at first sight, having turned out, on a minute inspection, mere thickening of the Cellular and other tunics of the gut from the fibrinous effusion of Simple Inflammation, which is the cause, I believe, of most of the permanent Strictures of the Rectum, as it is of those in the Urethra. When true Scirrhus does take place in any part of the Bowels, it commences in the Cellular membrane, finally working its way to the other coats; and the same observation is as forcibly applicable to Fungus, and, with one exception, also to Tubercle, which so often is attached to the Bowels of young cachectic persons. By way of preventing unnecessary repetitions, I must refer the reader to the Preliminary Remarks of the First Fasciculus for a general description of these adventitious Formations; but it may be noticed in this place, that I have found Tubercle in the Serous membrane of the Bowels, under three modifications: first, as small miliary points, thickly or thinly set here or there, semitransparent and firm; secondly, as uniformly opaque bodies of a larger size, and nearly of the colour and consistence of the kernel of a ripe horse chesnut; and lastly, as soft whitish substances, not very unlike cut portions of the medullary part of the brain. The first and second modifications of Tubercle are seated in the Cellular membrane, subjacent to the Serous one, and likewise exist in the same texture which connects the Mucous to the Muscular coat of the intestines; but the soft *Medullary* variety, if such an expression be allowable, appears to be formed, in general, on the free surface of the Serous membrane itself, and I have known it blended with layers of fibrine effused from Inflammation. One of the most enlightened pathologists of the age, Dr. Allison of Edinburgh, seems to think that Tubercle is one of the products of Inflammation; and certainly this variety of Tubercle, if such it may be fairly considered, would give a strong colouring to that opinion. But then, it might be justly asked, if Tubercle be the mere product of Inflammation, how does it happen that we so often see the remains of Inflammation, Acute and Chronic, without any vestige of that body? At all events, therefore, if Inflammation be connected with the origin of Tubercle, some other condition must concur in the human body, since Inflammation simply of itself is not adequate to produce the effect in ordinary cases, even where the texture of the part, and the age of the patient, are the most favourable for its developement. Moreover, Tubercle is often deposited in minute specks on perfectly transparent portions of Serous membrane, which, in many cases, only appear to become distinctly inflamed, when the Tubercles have so enlarged or multiplied as to operate as irritants to the part. But leaving this as a point well worthy of further inquiry, it may be remarked, that authors have differed in their classification of Tubercles; some contending, like Bayle, that the miliary is a distinct variety; and others, like Laennec, that it is merely the germ of the rest. In certain cases we find the lungs studded with miliary Tubercles, nearly of the same size and character throughout, as if they really were distinct; while in others, we find some in the miliary state, some progressive, and some mature, as if they were the same in kind, but at different stages. Again, in one case, we shall find, that Tubercles are apparently composed chiefly of albumen or fibrine, in another, of an ill-conditioned curdly substance, almost like cheese, and in a third calcareous matter is discoverable; but then in one and the same case, we occasionally detect all these appearances, as if they had been effected by successive changes in Tubercles originally of one nature. All the facts, indeed, which have come under my own eye, would incline me to the opinion, that the miliary Tubercle is the original form, of which the rest are only modifications; but as I am acquainted with men whose opportunities have been more extensive than mine, and who have come to a different conclusion, I must wait for a more enlarged experience and a more laborious research, before I satisfactorily make up my mind on this subject. Nature is full of mysteries, and doubt is not only a natural state of the mind, but very desirable in the prosecution of the sciences, because it leads from one inquiry to another, by which the truth is often at last revealed.

Melanosis is another peculiar deposit; and so different in its sensible qualities from any of the products of Inflammation, that it cannot be fairly referred to that cause, or indeed to any known condition of the solids or fluids. This deposit is sometimes connected with the Bowels. In one case it was spread like so much paint between the Serous and Cellular texture, without any concomitant signs of Inflammation—in another it was contained between the Serous membrane, and an outer layer of lymph—so that when the latter was separated, the bowels looked as if they had been dyed by very dark ink. In this instance the liver and spleen were also melanotic; the structure of the former, being organically changed, while that of the latter, the colour excepted, seemed to be quite natural. If an inference might be drawn from my own experience, Melanosis always occurs in ill-conditioned subjects, especially in those largely addicted to the use of distilled or fermented liquors. This peculiar secretion I have seen so mingled throughout genuine Fungus attached to the intestines, that they might have been deemed one and the same, but the black appearance was a mere dye, and I have known similar tumours of a yellow colour, from the absorption of bile, where the liver had been indurated.

In regard to Simple Inflammation of the Serous membrane of the Bowels, it generally leaves very distinct traces, among the most remarkable of which may be enumerated injection of its capillary vessels, thickening, opacity, pulpiness, and easy separation from the cellular texture subjacent, together with an effusion of lymph and serum. We know too little about first causes to be enabled to note the series of phenomena which primarily arise in Inflammation; but redness of those capillaries which are generally supposed to convey a colourless fluid in the healthy state, is one of the most manifest signs at an early stage, and effusion certainly and soon follows. That portion of effusion which takes place from the free surface of the Serous membrane into the cavity of the abdomen is manifest at first sight, and therefore has been deemed either the sole or most important one; but serum and lymph are poured into the connecting cellular texture and much of the thickening, opacity, pulpiness, and readiness with which the Serous coat can be separated from the rest, is dependent upon this deposition, this interstitial blending of serum and lymph, as any one may satisfy himself by a critical examination of a portion of inflamed intestine. The red injection of the Serous membrane of the Bowels has nothing peculiar in its appearance, being mostly arborescent, sometimes intermixed like network, and occasionally dotted in some parts. This injection has been supposed to exist in the arterial capillaries; but whatever may be the case during life, I am satisfied that it is, after death, chiefly seated in the venous capillaries; for, on a minute inspection, the small ramifications of the arteries may be seen empty, traversing the intermediate portions of intestine, like so many transparent lines. The degree of the redness is ultimately influenced by the quantity of the secretion, being greatest in those cases where there is the least serum and lymph. One of the principal differences between the aspect of Acute and Chronic Inflammation is, that the latter is considerably darker, while the larger branches of veins, communicating with the smaller, are considerably more dilated. It has been generally supposed, that the serum and lymph are simultaneously separated from the blood in Inflammation of the Serous membranes; and that the serum being partly or wholly absorbed, the lymph either floats in shreds in the remaining fluid, or is deposited on the free surface of the membrane, when little or no fluid is found. But in some examples of Acute pleurisy and peritonitis, which terminated very rapidly, the lymph was effused in the first instance, while in those cases which had been more protracted, the effusion of serum was generally considerable; so that it has appeared to me most probable, that, at all events, the *copious* separation of serum does not occur at the very commencement, but towards the middle or more advanced stage, and this opinion accords with some experiments made by my friend Mr. Cocks on the lower animals. Early and free venesection materially checks the effusion from acutely inflamed Serous membranes; and the lancet, at this period of such cases, being employed more boldly in this country than on the continent, may perhaps be the reason why we so seldom, in Acute Pleurisy for example, see those large effusions described by Laennec and others; indeed I cannot help suspecting, that in some of those instances, a Chronic Pleurisy had preceded the Acute, and it is a remark worthy of remembrance, that such an occurrence is by no means uncommon, both in Inflammation of Serous and Mucous Textures. The effusion of Serum, however, is usually more abundant in Inflammation of the Pleura, than of the Peritoneum, if we except some of the cases of Peritonitis which occur in the Puerperal state, and some Chronic ones which terminate in decided Acites. When the fluid drawn from the abdomen of dropsical patients is turbid from the presence of albumen or fibrine, which is easily ascertainable, the case is connected with Inflammation of some portion of the Peritoneum; but when the fluid evacuated is perfectly transparent and straw-coloured, it affords a strong presumption, that some great organic affection exists in the liver, or elsewhere. No doubt what we abstractedly term Dropsy is often the result of Inflammation, and much good has arisen by attempts to refer Dropsy, a mere consequence, to its true causes;* but the doctrine of Inflammation is unquestionably pushed too far when it is made to embrace every modification of dropsical disease, which in the aged is so frequently

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* Among the more recent publications on the inflammatory nature of dropsy, none will be found to contain more useful matter than that of my friend Dr. Ayre.

occasioned by organic derangement, of a most dangerous kind, that we might to them apply the language of Aretæus, *ab ipso pauci liberantur, idque felicitate, ac deorum potius quam artis auxilio.* If, however, I might digress for a moment, one variety of Inflammation, namely, that of the inner lining of the arteries and veins, is oftener connected with dropsy, than even most of the advocates of the phlogistic hypothesis are aware; at least I have so repeatedly witnessed it, that in every fatal case of dropsy, I would advise an examination of those vessels, that we may be able thereby more fully to elucidate this point of pathology.

Pus is occasionally secreted from Inflammation of the Serous membrane of the Bowels, but more frequently in Chronic than in Acute cases. Sometimes it is of the consistence of cream, and at other times in almost pulpy patches; and now and then there is a secretion which seems almost to unite the characters both of pus and lymph, being generally thrown off from the membrane, in Acute or Sub-Acute Inflammation, without any vestige of ulceration on its free surface. Indeed, in the whole course of my practice, I have only had three cases, in which ulceration commenced *originally* in the Serous membrane of the Bowels; but I have witnessed several where the ulceration began in the Mucous membrane, and eventually reached and penetrated the Serous coat. When a considerable opening was thus made in the colon, some of the contents of that gut escaped into the cavity of the abdomen; but when the opening was small, this did not happen, the contraction and pressure of the abdominal muscles having probably concurred in the prevention. Nature, too, if we may use that expression for certain laws which the Deity has imposed, sometimes effectually precludes such an occurrence by a thick layer of lymph over that part of the Serous membrane directly opposed to the ulceration of the Mucous one. If a patient should die before this lymph should be perfectly organized, it may be scraped off, and the Serous membrane immediately beneath is usually of a pulpy softness. In Chronic Inflammation of this texture, we often find the coils of the intestines firmly united to each other by the fibrinous effusion, but, in some instances, bands resembling cellular membrane are stretched between one convolution and another; and where bands of this kind have been attached to a fixed point at one end, and connected with a portion of the Bowels at the other, I have known all the symptoms of hernia to arise from a Stricture being thus at last induced. It is mentioned by various authorities, that pure blood is sometimes the product of Inflammation of the Serous membrane of the belly; but not having encountered such an event, I conclude that it must be rare, though it is not uncommon to observe a bloody sort of Serum, which is oftener met with where an Acute has supervened a Chronic Inflammation of the Serous membrane, than where an Acute Inflammation had existed from the commencement. In an instance which recently fell under my observation, there was a considerable quantity of apparently pure blood in the abdomen; but some Fungous tumours were discovered, from which it had proceeded, and I have known a similar collection of blood from other organic lesions.

A very peculiar condition of intestine is occasionally found, which might, perhaps, be appropriately termed Hemorrhagic; the Mucous, Cellular, Muscular, and Serous membranes being all most excessively injected by blood of a dark rich purple colour; yet even in such cases I have never known any blood to exude from the Serous membrane, though copious Hemorrhage generally takes place from the Mucous one. This peculiar condition of intestine, so far as I have observed, never occurs in Common Fever, but is the occasional attendant of Specific Fever, as defined in the Preliminary Remarks; and in the cases which were fatal, I have always found it combined with a very loaded state of the capillaries of the Mucous membrane of the Bronchia, which was at the same time besmeared with a morbid and tenacious secretion. This circumstance may account for the singular colour of the intestine, as it would prevent the venous blood from undergoing the natural change in the lungs, so that, in fact, a black blood circulated in the arteries. But if I have never known an instance in which blood was poured out from the free surface of the Serous membrane in a state of Inflammation, I have examined several bodies where it was effused into the cellular membrane beneath, in the form of small ecchymoses, and in the Hemorrhagic intestine, have occasionally seen it, as a fluid gore in the cellular membrane, flowing out abundantly, when the gut was incised. Indeed, after the fatal termination of severe cases of Bronchitis, particularly of a Specific character, it is not uncommon to find the blood fluid, a fact of some interest in questions of medical jurisprudence.

Medical writers have justly made a distinction between gangrene and sphacelus, the circulation, animal heat and sensibility all remaining in the first, but not in the last, the one being the threatened, the other the actual death of the part. In two cases, a portion of the gut was so flabby and lacerable, as to indicate that sphacelus had occurred there, though no acrid poison had been taken. Where Intus-susceptio had proved mortal, the implicated portion of intestine exhibited all the gradations from the most intense injection to the gradually approaching, and, at last, completely established appearance of gangrene, in which the gut is very dark, all vestige of injection being lost in the local and extreme accumulation of blood. But, in ordinary cases of Sero-Enteritis, death happens before the occurrence even of gangrene, from the influence which the Inflammation has on the remote parts of the body, particularly the nervous system, lungs, and heart; an influence which we vainly attempt to denote by the term constitutional or sympathetic disturbance, or some other, which serves as a shelter of expression for our utter ignorance of the subject. That a small quantity of blood, not perhaps, on some occasions, more than a spoonful if it could be collected, wandering out of the common course of the circulation, that a mere *error loci* of some of the red particles of the blood should cause death, and leave the intestine entire, is to my mind one of the most singular facts in the whole range of pathological inquiry—a mystery which cannot be removed in the present state of medical science; but it forcibly intimates the necessity of endeavouring to explore those relations which exist between the different parts or systems which compose the body, since this is only one among many, and an ample collection of facts might lead us at last to the discovery of some general law on which they, perhaps, wholly depend.

It is not unusual to perceive, on opening bodies, some degree of dusky injection of the Serous membrane of the Bowels; but this is not to be regarded as a true sign of previous Inflammation, for it is unattended by any of that interstitial effusion of serum or lymph into the cellular membrane of the intestines, which is always a concomitant of genuine Inflammation seated there. We talk of *Resolution* technically, as if Inflammation disappeared without any intermediate change whatever; but that is not the fact, for it never terminates without an increased secretion from the affected texture. These general remarks having been premised, I shall proceed, by drawings and letter-press, to illustrate, in this Fasciculus, Inflammation Acute and Chronic, the Hemorrhagic Intestine, Tubercle, and Fungus, these being the appearances most frequently presented in the Morbid Anatomy of the Serous membrane of the Bowels; but as the derangements of the solids displayed after death are only useful when connected with the correspondent disturbances which occur during life, I shall endeavour to enumerate the Symptoms by which the presence of some of the forementioned conditions may be detected at the bed-side of the sick.

Fig. 1.

Plate 11.

Fig. 2.

Drawn by W.P. Cocks. Printed by Engelmann, Graf, Coindet & Co. On Stone by W. Fairland.

London. Published by Baldwin & Cradock. Sept.r 1829.

PLATE I.

These two Drawings represent Acute Inflammation at different Stages, one in which there is great injection without an effusion of lymph, another in which there is less injection with an effusion of lymph partly spread upon the surface of the Bowels, and partly dependent, almost like so much fringe.

FIG. I.

Shows that not only the minute vessels called capillaries are loaded with red blood, but that the larger communicating branches, of various dimensions, are also in the same state.

a The larger branches full of red blood.

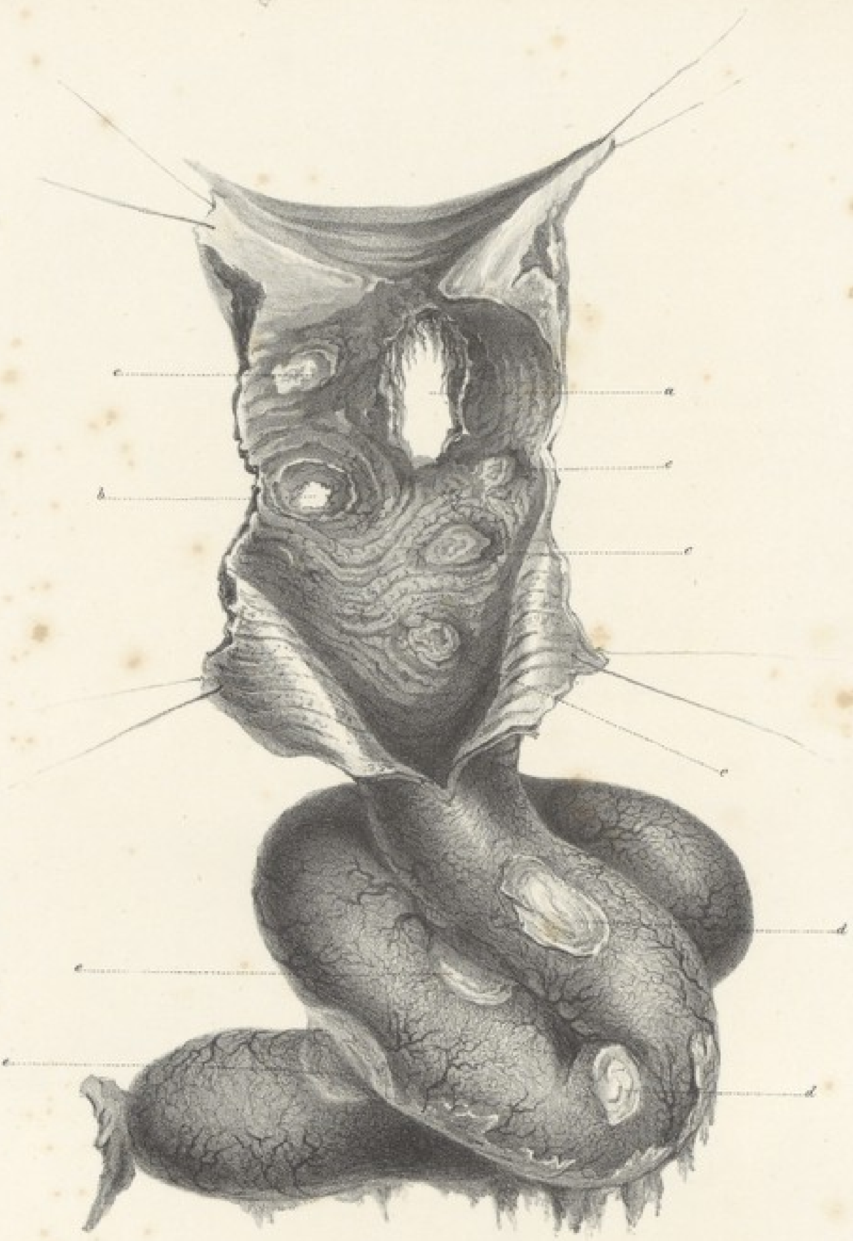
b The smaller branches similarly affected.

FIG. II.

The injection and redness are here delineated as less intense, the effect of the effusion of the lymph.

a Lymph in various situations.

b Intermediate spaces of capillary Injection.



Drawn by W. P. Cocks

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London: Published by Baldwin & Cradock. Septr 1828.

PLATE II.

THIS Plate is designed to show the Combination of Ulceration of the Mucous membrane of the Ileum, and Inflammation of the Serous membrane arising as a consequence.

a Large Ulceration and perforation near the Cœcal valve.

b Ulceration of Brunner's glands with perforation.

c Destruction of Mucous, Cellular, and Muscular Tunics.

d A patch of lymph on the Serous membrane directly opposite to an Ulcer on the Mucous one.

e Coils of Intestines thrown back to show the softened appearance of the Serous Coat under such partial effusions of lymph.

The Edges of one of the Ulcers are raised and indurated, and of another thin and soft, and that varicose State of Veins round them is observable which sometimes leads to hemorrhage. The particular description of such Ulcers, however, is reserved for the Fourth Fasciculus.

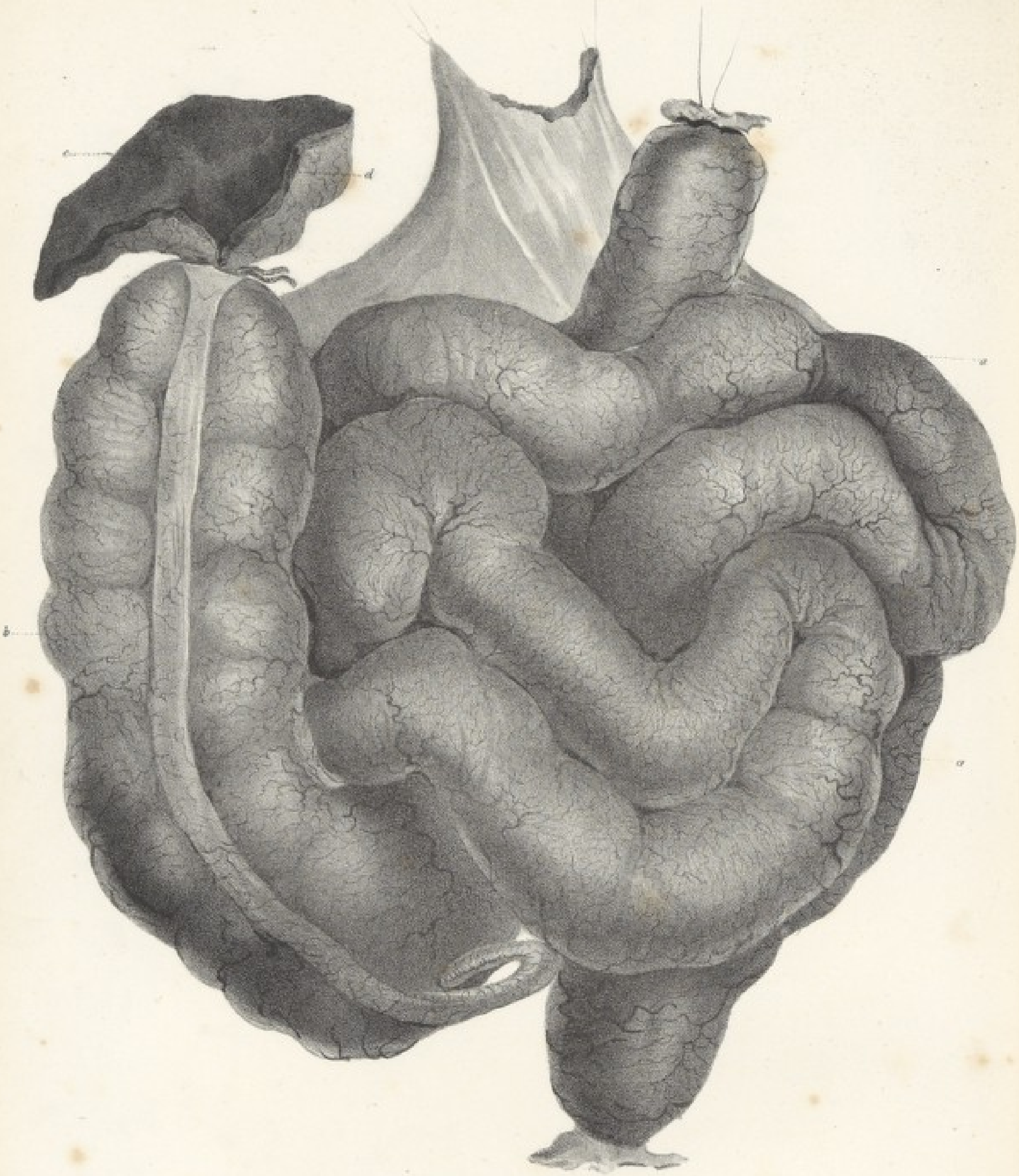
PLATE II.

This Plate is designed to show the Combination of Ulceration of the Mucous membrane of the Ileum, and Inflammation of the Serous membrane arising as a consequence.

- *a* Large Ulceration and perforation near the Ileo-cæcal valve.
- *b* Ulceration of Brunner's glands with perforation.
- *c* Destruction of Mucous, Cellular, and Muscular Tunics.
- *d* A patch of Lymph on the Serous membrane directly opposite to an Ulcer on the Mucous one.
- *e* Coils of Intestines drawn back to show the inflamed appearance of the Serous Coat under such partial effusion of Lymph.

The Edges of some of the Ulcers are raised and indurated, and of another thin and soft, and that [illegible] of Vermicular form is observable which sometimes leads to haemorrhage. The particular description of such Ulcers, however, is reserved for the Fourth Fasciculus.

Plate 13.



Drawn by W. P. Cocks
Printed by Engelmann & Co.
On Stone by W. Fairland
London. Published by Baldwin & Cradock, Sept 1828.

PLATE III.

THIS Plate is designed to show that peculiar State of Bowels called Hemorrhagic, which occasionally is found in Specific fever, and in which all the textures are highly engorged with blood of a remarkably rich dark purple colour.

a The Capillary vessels of the small intestines loaded with purple blood.

b The Colon in a similar state.

c The Mucous membrane abounding in blood of a chocolate colour.

d The cut edges of the Gut showing that all the Coats are implicated in this species of injection.

Plate 14

Drawn by J. Savage
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PLATE IV.

THIS Drawing represents, first, the duskiness of Chronic Inflammation with the greater dilatation of the Veins; secondly, some intermediate portions of the Serous coat of a dirty dull grey or whitish colour, with a loss of transparency, so that such portions almost resemble soaked parchment; thirdly, thickening of the Serous coat from interstitial effusion; fourthly, adhesions between the Coils, some close, and one in the form of a Cellular band; fifthly, Ulcerations commencing originally in the Serous coat; and lastly, a Contracted State of the Mesentery, and consequent puckerings or foldings of the connected portions of the Ileum.

a Thickening of the Serous membrane incised and thrown back.

b Lymph between the Coils of the Intestines.

c A band of lymph in the form of Cellular membrane stretched from one Coil to another.

e Points of original Ulceration of the Serous membrane.

f Cut and thickened Mesentery.

g Contracted Mesentery with a loaded State of its Veins.

h The consequent puckering of the connected portion of Ileum.

Whether this State of the Mesentery and Intestine be an original formation, or whether it be the effect of Inflammation, I am yet at a loss decidedly to determine; but in the few cases where it occurred, the evidences of Chronic Inflammation were strongly marked. This, however, might have been not a necessary, but an accidental combination.

The dull grey or whitish appearance of the intestines so often attendant upon Chronic Inflammation of the Serous membrane is not denoted by any letter of reference, but it is here and there visible between the injected portions.

Plate 15.

Fig. 1.

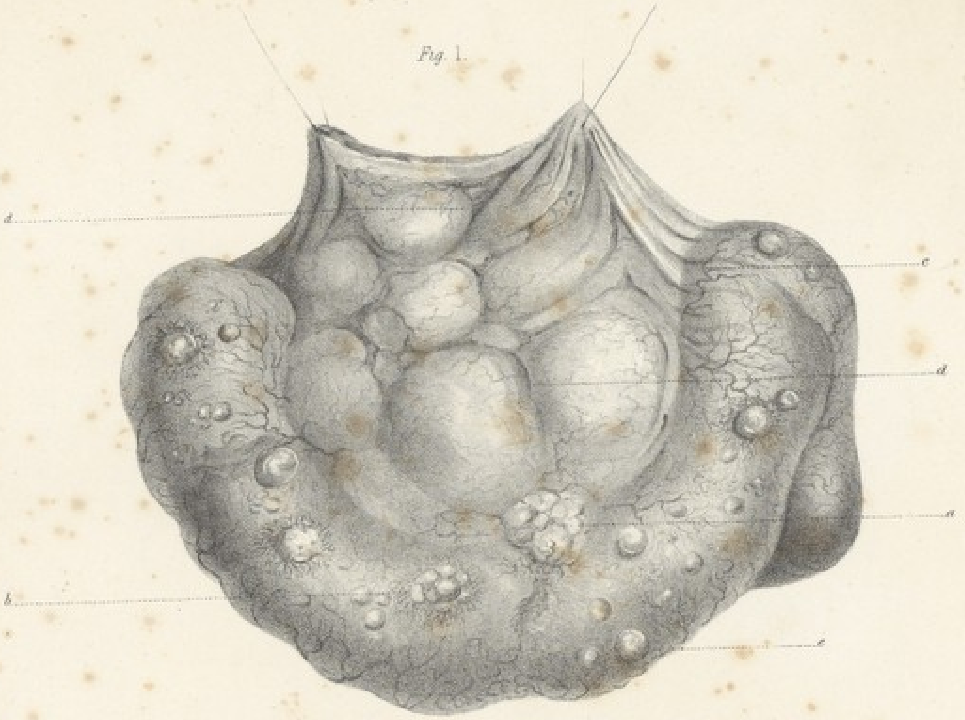

Fig. 2.

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PLATE V.

THE first Drawing in this plate is intended to represent Tubercles seated under the Serous membrane, and making their way outwards; the Second Drawing represents true Fungus, in the same situation, of various sizes.

FIG. I.

a An aggregation of Tubercles.
b Tubercles with an Areola of vessels.
c Injection of Small vessels.
d Mesenteric Glands considerably enlarged from the adjacent irritation.
e A Tubercle of an intermediate size.

FIG. II.

a Increasing Fungi.
b Smaller Fungi.
c Injected State of the Mucous membrane of the Gut.
d Thickened and fatty State of the Mesentery.

If the largest Fungus in this Drawing be examined, the Serous Coat is represented as rubbed off, and that part of the Tumor presents a granular appearance, such as Dr. Charles Clark has described in the Cauliflower Excrescence of the Uterus, which is unquestionably a mere variety of the Fungus Hæmatoides of English authors, and the Fungus Encephaloides of Foreign ones.

In the body from which this Drawing was taken, the Fungi were not confined to the Bowels, but also occupied the Ovary and the Liver, the functions of the latter organ having been thereby so much disturbed, that the Skin became tinged with bile, as well as the Tumors themselves.

Plate 16.

Drawn by Johson Savage

Printed by Engelmann &Co.

On Stone by Thos. Fairland

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PLATE VI.

SHOWS an Intus-susceptio of the Ileum, which was followed by Stricture and Inflammation, so as to cause the patient's death.

a An upper portion of the Ileum forced within a lower portion of the same intestine.

b The lower part, with a Section, by which the Mucous membrane is exposed.

c The uniformly dark colour of Intestine which indicates gangrene—at least no trace of vessels is apparent there. Is the Cause of this colour and condition connected with an effusion of bloody Serum into the Cellular texture?

Between this uniformly dark portion of intestine, and the termination of the Inflammation, the various degrees of injection, and shades of colour, are well described by the Artist, because faithfully copied from Nature.

THE SYMPTOMS.

In a previous Number it was stated that in general, a line of demarcation could be drawn between those cases in which the Serous membrane of the Stomach was inflamed and others in which the Mucous membrane was affected, and, therefore, the first was designated by the word Sero-Gastritis, and the second by that of Muco-Gastritis. A like distinction more manifestly obtains in Inflammation of the Serous membrane and of the Mucous membrane of the Bowels. On that account, the one shall be called Sero-Enteritis, and the other Muco-Enteritis. It may possibly be asked why other and more minute distinctions are not attempted, since Inflammation may attack the Cellular or the Muscular tunic of the intestines? To this question I answer that, though the fact be admitted, yet my own observations do not authorise me to adduce any symptoms that can be considered as truly pathognomonic of such conditions, and therefore it is right that I should at once acknowledge my ignorance in this particular. Though far from wishing to decry any legitimate effort at nice, elaborate, and useful discriminations, yet I cannot help observing, that the *rage* for minute distinction has been carried by some writers, especially on the continent, to a most amusing extent, the lines which they profess to draw being, to my apprehension, like those of the mathematician, without any perceptible length, breadth, or thickness.

ACUTE AND SUB-ACUTE SERO-ENTERITIS.

In acute Sero-Enteritis, fairly established, there is considerable fever. The skin is everywhere hotter than natural, often dry about the trunk, and at the same time moist in some of the extreme parts of the body, but especially about the palms of the hands and the forehead. The pulse is very quick, ranging generally from 120 to 130 in the minute; it is also very small, as if not only the heart, but the artery at the wrist had contracted upon itself; yet if it be accurately examined, it will be found, during the stage of excitement, firmer than natural, almost feeling then like a small whip-cord or harpstring. The tongue is covered with a whitish fur, and there is excessive thirst. The breathing is hurried and anxious, and yet the respiration seems principally carried on by the diaphragm and intercostals, the abdominal muscles acting less than in the healthy state. The integuments of the belly lose their natural softness and pliability, and are hard and irregular to the touch. There is a concentration of heat over the inflamed region of Serous membrane, and both pain and tenderness are complained of there particularly under pressure, during the continuance of which the patient winces—changes the expression of his face from an increase of pain. The Bowels are obstinately constipated, an effect of the Inflammation of the Serous membrane, which is, unfortunately, too often treated as a cause of the Inflammation. The abdomen is tense and distended, chiefly from the generation of flatus within, of which the patient usually complains much. If nausea, retching, or vomiting should not occur in the commencement of the attack, they are almost sure to be its attendants during the progress of the Inflammation, and are generally the most urgent in the worst cases. The patient almost always lies upon his back with his legs drawn upwards, as if instinctively to relax the abdominal muscles, and he is cautious in moving the lower extremities, lest he should increase the pain; while he mostly moves the upper more frequently than natural, and in bad cases, often dashes down the hand, or lets it abruptly fall upon the bed-clothes. The urine is scanty and high-coloured, as it is in almost all Serous Inflammations.

This is a brief account of the leading symptoms, but it should be remarked, that Sero-Enteritis is frequently ushered in by a sort of rigor, and, when that passes away, it has two subsequent stages, one of excitement, and another of collapse. It is important to distinguish these stages from each, because Sero-Enteritis is only remediable in that of excitement, at least nothing is more rare than to see a patient recover from the stage of collapse.

In the stage of excitement, the skin is uniformly hotter than natural, except in those parts which are moist, and exposed to the air, and then the evaporation sometimes makes them rather cool, a circumstance which should be remembered, because I have known hasty observers conclude from it alone, that the fatal stage of collapse was at hand, when in reality it was very far distant. During the stage of excitement, too, the pulse, though smaller, is always more resisting than natural; the respiration is not embarrassed, but merely quick and anxious; the countenance has not a sunken character, and the patient continues to complain of the abdominal pain.

Whereas in the stage of collapse, the heat falls every where, first on the extremities, and then upon the trunk, the skin becoming of a clayey coldness and dampness at last, while the fingers and hands are generally mottled by a dun sort of redness here and there. The pulse becomes quicker, smaller, and is now really weak, feeling like a soft undulating line. The respiration is embarrassed even to exhaustion; the whole muscular power is prostrate; the face is sunk, and especially hollow round the orbits; the abdomen grows more and more tumid and tense, while the pain mostly lessens, or sometimes entirely leaves the patient; and lastly a sort of passive gulping generally takes place, the contents of the stomach being apparently forced up the æsophagus by the pressure of the intestines, which are then for the most part enormously distended by flatus. In this state, the patient sinks, almost always with a collected mind in Common Sero-Enteritis, and sometimes even speaks confidently of recovery, when all hopes have been extinguished in the practitioner's mind.

SUB-ACUTE SERO-ENTERITIS.

Sub-Acute Sero-Enteritis differs in three points from the Acute; first, there is a less urgent abdominal uneasiness; secondly, there is less febrile disturbance; and, lastly, the duration of the Sub-Acute is more protracted than that of the Acute; the latter, if not arrested, generally terminating in about five days, while the former may, and often does, extend beyond twice that period. This difference in the duration should never be forgotten by the medical attendant; for, as the Acute is rapid in its progress compared to the Sub-Acute, so it requires a more prompt and powerful application of the appropriate remedies. Indeed, it is to the tardy adoption of half measures that the great mortality of Common Sero-Enteritis may be mainly ascribed; at least, it shall hereafter be shown that, if it be timely and boldly encountered by the lancet and opium, it may in general be speedily overcome.

SERO-ENTERITIS FROM ULCERATION OF THE MUCOUS MEMBRANE.

When Sero-Enteritis follows ulceration of the Mucous membrane, its cause and complicated nature may be inferred from two circumstances; first, the previous history, which will show that Mucous Inflammation had existed for some time previously; secondly, the suddenness and intensity of the supervening attack of the acute Sero-Enteritis. If the previous Inflammation of the Mucous membrane had been confined to the small intestines, during its continuance, the tongue would be red at the tip and edges, the bowels easily moved, and the stools of a mucilaginous or oleaginous character, the integuments of the belly hard, and tender under pressure at particular points or patches; but if the Inflammation had extended to the larger intestines, an intractable diarrhæa would be a conspicuous symptom, without griping, when the Inflammation was seated in the caput coli—with griping, when seated lower down, in the transverse arch, or sigmoid flexure. As already observed, the supervening attack of Acute Inflammation is sudden and intense, without any assignable cause, save that of Ulceration, which could in any way account for such an unexpected occurrence. The pain is rapidly diffused over the whole abdomen; the patient is often affected by stranguary; the pulse becomes excessively rapid, the skin very hot, and the breathing most anxious. Vomiting follows, generally of a dark matter, of a mucous consistence, and the patient sinks commonly within forty-eight hours from the attack, suffering more pain to the last than in common cases of Sero-Enteritis, where there is no Ulceration. Two cases occurred, which have left an impression upon my mind, that patients now and then recover from this dreadful combination of Inflammation. The first case of this kind took place several years ago; the last happened, recently, in an excellent and highly esteemed friend. Both these were preceded by signs of Mucous Inflammation, both followed by the Acute attack of Sero-Enteritis, which, yielding to prompt and bold evacuations, left the signs of Ulceration on the Mucous texture, and among the rest discharges of pus, from which both the patients alike slowly but completely recovered. Such cases may be considered as very rare escapes from one of the most deadly forms of disease—the forlorn hope of Inflammatory Affections.

The term Peritonitis is used most desultorily in physic; but, if by it be meant Inflammation of that portion of the peritoneum which lines the abdominal muscles, it may be said occasionally to exist in contra-distinction to Sero-Enteritis. When Acute Peritonitis, as above explained, occurs, it may be distinguished from Acute Sero-Enteritis, by the following Symptoms; namely, in Acute Peritonitis the pain is diffused over the whole belly, whereas in Sero-Enteritis it is mostly limited to some particular part of that region. In Acute Peritonitis, the skin is not only hotter, but the pulse is more expanded than in Acute Sero-Enteritis. Finally, nausea, retching, and vomiting are far more apt to appear at an early stage of Acute Sero-Enteritis, than of

Acute Peritonitis. If any case should take place in which the pain and tenderness are universally diffused over the belly from the beginning, in which the pulse is small as well as hard, and in which vomiting has been a prominent sign from the onset, it may be concluded, either that a very large portion of the Serous membranes of the Bowels is inflamed, or that a less portion is inflamed conjointly with a considerable one of the peritoneum lining the abdominal muscles.

The terms Puerperal Fever and Puerperal Peritonitis are likewise vaguely employed in medical literature. If by Puerperal Fever be meant a febrile affection *sui generis,* entirely discrepant from every other known Fever, then I confidently answer that there is no such thing in nature, that it is the sole creation of the closet—"such stuff as dreams are made of"—a mere tissue, in short, of the fancy. What then is Puerperal Fever? It is a Common or Specific Fever, occurring in the Puerperal state, and modified, like almost every other affection, by the condition of the patient at the time of the attack. If Small-pox, Measles, Scarlet Fever, or Typhus were to occur in the Puerperal state, we should not, on that account, give each a new designation, though they would be modified by the predisposed condition of the Serous membrane of the abdomen, so much so, that each, in a large majority of instances would be complicated with Acute Inflammation of that membrane. Again, if a Fever arose not from any such Specific occasions as give rise to Small-pox, Measles, Scarlet Fever, and Typhus, but from a Common occasion, for instance, from the application of a low or variable temperature, or any like agent not possessed of a Specific property, that Fever would have not a Specific, but a Common character, and the chief mischief would fall upon the peritoneum in the form of Inflammation, for the reason already mentioned, namely, that this texture is powerfully predisposed to that state immediately after delivery. Now, what authors have called Puerperal Fever, or Puerperal Peritonitis, is, I repeat, a Common or a Specific Fever, occurring in the Puerperal state, and inevitably modified by that state. In general, it is a Common Fever combined with Inflammation of the abdominal and pelvic viscera, but it is sometimes genuine Typhous Fever occurring in the same state, and then, superadded to the symptoms of Peritonitis, are developed, rapidly for the most part, those symptoms, by which a fully formed Typhus can be recognized; namely, a glazed dry brown tongue; a dusky lip and cheek; a brain more or less muddled; a heavy intoxicated or sleepy cast of countenance; a weak respiration even to panting when the patient speaks; a lax flesh; much prostration; and a very soft, compressible pulse. It may be here not improperly noticed, that, when a case of Common Fever terminates fatally in the Puerperal state, the remains of Inflammation are generally confined to the abdominal and pelvic viscera; but not so when Typhus ends mortally in the Puerperal state, for then not only the Mucous but the Serous membrane of the Bowels generally suffers, and the Pia Mater, as well as the Arachnoid show evidences of previous Inflammation, while the bronchial lining is usually much injected by black blood, and covered by an adhesive secretion. When this bronchial affection predominates from an early period, the face has a dusky hue, the respiration is feeble, the pulse is soft, the heat subdued, and when the patient coughs the sound of bronchial stuffing can be heard, or at all events it can be detected by the application of the stethoscope. It is of great consequence to consider this deliberately in determining the treatment; for, wherever an urgent Bronchitis co-exists with abdominal Inflammation, patients do not bear evacuations of blood by any means so well as when it is absent. Indeed, such cases are always very perilous, and often end unfavourably, in despite of the most judicious management.

Nothing is more frequent than to find tenderness of the Epigastrium both in Acute and Chronic cases, and when it exists alone, it amounts to nothing in a pathological estimate; and it should be borne in mind by the young practitioner, that mere tenderness of the abdominal integuments over the regions of the intestines is not, standing by itself, to be taken as an unequivocal sign of Inflammation either of the Serous or Mucous membrane of the Bowels. In specific Fevers, but especially in Typhus, I have again and again known the whole integuments of the belly so tender to the touch, that the patient could not bear the slightest pressure, and have observed the same thing occasionally in Common Fevers. But in such cases, whether of a Common or Specific nature, the integuments of the belly were soft and pliable, and even a tenderness, too, existed on other parts of the surface, and there were not the combined Symptoms of Abdominal Inflammation; while, on the contrary, indications existed of some affection of the Brain or Spinal Cord, of which this superficial tenderness is often an effect. An accumulation of scybala in the colon, distention of the Bowels by flatus, long continued coughing, deep seated Inflammation of the integuments themselves, without discoloration, will all now and then create abdominal tenderness; but if a medical attendant carefully consider the *combination* of the symptoms, he will be able to determine whether internal Inflammation be absent or present. In the course of my experience, I have met with some cases of strangulated hernia, which had been treated on the supposition that they were pure examples of Sero-Enteritis; and in every instance of abdominal Inflammation, I would advise the practitioner to ascertain, by the touch, whether or not there be a femoral, inguinal, or umbilical hernia in a state of strangulation. The two former are the most frequent, but the latter sometimes exists, a remarkable instance of which came under my care some time ago. A married woman had an attack of cholera. The purging ceased, but the stomach remained very irritable, and signs of Sero-Enteritis supervened. My opinion was requested, and on examining the abdomen, I felt a large umbilical hernia, composed partly of omentum, and partly of intestine, according to my impression; but the patient told me it was a matter of no consequence, as she had long been subject to that affection, and could at any time make it disappear by pressure. She was desired to do so, but failed, after repeated efforts. She was copiously bled; a full dose of opium was then administered, and the hernia having been reduced by the hand, the Bowels acted spontaneously, and the patient soon recovered.

A still more remarkable case lately happened. An elderly lady was attacked with griping pains, about ten o'clock at night. A near relative of hers requested my attendance. The patient expressed her regret that I should have had the trouble of coming at so late an hour, adding, that she had been repeatedly liable to similar attacks of Cholic, from constipation, and that she had always got rid of them by taking opium first, and mild aperients afterwards. The stomach was rather irritable, the pulse a little quicker than natural, but the skin was cool, and there was no tumour over that part of the abdomen which I felt, for the patient's hand was laid across the abdomen a little above the Umbilicus, as if to give me a hint that such an examination was not agreeable. She was desired to pursue the same method which had succeeded before. The next day the symptoms were nearly the same, except that though the pains were still only occasional, they were upon the whole more severe and frequent. The Epigastrium was soft, and the hand placed in the same position. The opium was repeated, glysters administered, and a dose of castor oil occasionally given, as it remained upon the stomach. On the third morning, the patient was labouring under fever, with considerable pain, and an epigastrium distended and tense—the hand still placed in the same situation. Suspecting that some mechanical cause of obstruction existed in the course of the intestines, I removed the hand, and found that it covered an umbilical hernia, which upon examination was found to be in a strangulated state.

An eminent surgeon was consulted, but neither he nor an experienced friend, who had previously attended the case with me, could reduce it, and the operation became necessary, to give the patient a chance for life. It was most skilfully performed, and up to the present time, more than a fortnight from the operation, every thing has gone on well, though it was requisite to remove a considerable portion of omentum, in order to free the strangulated portion of intestine, which had, upon exposure, only a slight appearance of Inflammation, from the circumstance that the constriction had not long existed upon the gut.

In alluding to a daughter of retired habits, a mother once beautifully observed, that her modesty shrouded her affections; and such is the delicacy of the female mind, that women often run the risk of their lives, by the concealment of complaints which only can be detected by an examination. However devoted medical men may have been to the science which they profess, however deep an interest they may have taken in the welfare of their patients, in looking back upon a long experience, they must be sensible of having occasionally committed mistakes; and I have here put one of mine upon record, that others, amidst the multifarious demands of practice, may exercise, if possible, a more constant and strict care, particularly with reference to the abdominal and pelvic diseases incident to females.

INTUS-SUSCEPTIO.

In examining bodies, especially those of children dead of cerebral disease, it is not uncommon to find one portion of intestine doubled and enclosed within another, without any sign of Inflammation there, as if the Intus-Susceptio had taken place in the last struggles of life. But upon other occasions, the upper portion of intestine is, in like manner, folded into the lower, as if it had been done by force, while both the contained and containing parts of the gut, are greatly injected from Inflammation, the evidences of which occurred during life. This last-mentioned kind of Intus-Susceptio is likewise more frequent in children than adults, and one thing has struck me as remarkably interesting, namely, that most of the cases which I witnessed, followed the operation of *Drastic* purgatives, a part of the ileum having been driven into the colon, in the plurality of such examples.

It is difficult to enumerate symptoms which can be held as truly diagnostic of an Intus-Susceptio occasioning obstruction and Inflammation. But if in any case the intestines should appear to be gathered into a large irregular ball or lump in a particular region; if the pain proceeded from that region, and was every now and then suddenly and excessively aggravated; if febrile disturbance attended these symptoms, followed by a vomiting of a yellow pultaceous matter, with a fœcal odour, a dangerous Intus-Susceptio might be fairly suspected.

It has been stated by the most respectable authorities, that cases, with the ordinary characters of urgent Cholic, proved rapidly fatal, without the signs of Inflammation during life, or the appearances of it after death; but not a solitary instance of this nature has occurred in the whole course of my own experience, the effects of Inflammation having been fully displayed whenever the body was minutely examined. Nevertheless, I can easily imagine, that a patient might be so exhausted by repeated attacks of spasmodic pain as to sink under the shock of copious or even moderate evacuations, at an advanced stage of the complaint, for when pain has been long and severely endured, evacuations are often ill sustained. The usual forms of Colica Pictonum are chiefly distinguishable from Sero-Enteritis by the continued uneasiness about the Navel or Caput Coli being much more subdued, while sudden attacks of spasmodic pain every now and then intervene, which are relieved, as well as the subdued uneasiness, through gradual, and at last, great pressure. Besides, fever is present in Sero-Enteritis, with an increasing *flatulent* distention of the Bowels, both of which are absent in Colica Pictonum.

THE HEMORRHAGIC INTESTINE.

The Hemorrhagic state of intestine is sometimes accompanied by signs of Muco-Enteritis, and sometimes by those of Sero-Enteritis; but I have known it to occur again and again, without the combined indications of either the one or the other Solano, the noted Spanish author, long ago observed, that the quick rebounding pulse, which the ancients called *dierotos*, often presaged hemorrhage in Acute distempers; and certainly in the greatest number of instances this pulse preceded the hemorrhage attendant upon that universal injection of the tunics of the intestines already described. Yet, in some cases, the circulation was so calm, that no such irruption could have been anticipated. The integuments of the belly are mostly harder than natural, the recti muscles being in general more strongly expressed than the rest. The only sign, however, which can be relied upon, is the actual discharge of a large quantity of blood at once from the bowels of a very dark colour. In many cases it remains a fluid gore in the vessel, like so much menstrual discharge; but in others it is found partly fluid, and partly coagulated, the clots of cruor always being of a very loose consistence. It has been imagined, by a foreign writer, that when the blood evacuated from the bowels continues fluid, it is a certain sign of its having been *secreted* from the vessels, but this proposition appears to me too universal to be fairly admissible; for I have seen the blood passed in coagula, where the most careful inspection of the body after death could detect no appearance of a ruptured vessel. Moreover, though the menstrual discharge generally remains fluid, yet I am confident, that it sometimes coagulates, under certain conditions of the uterus, without the rupture of any of its vessels. Where hemorrhage, from the forementioned state of intestine, has once occurred, it is very liable to return again and again, so as to place the patient in the greatest jeopardy. Indeed, there was a time in the earlier part of my professional life, when most of the patients thus affected sunk under the repeated losses of blood; but I deem it very essential, to remark that since I have kept patients constantly recumbent and used laudanum in doses sufficient to soothe and sustain them, the general result has been extremely favourable. It is of great consequence to withhold purgatives, fruits, and slops in such cases, as they are apt to maintain the hemorrhage. The best diet is vermicelli or rice boiled to a pulp, and merely moistened with a little chicken broth, to remove the dryness and insipidity. Whenever patients complain of being faint after a motion, the stools should always be attentively examined. For want of this precaution I have known not only the Hemorrhagic state of the intestine overlooked in fever, but other conditions of the Bowels attended by discharges of blood, as will be more particularly noticed in the illustrations of the Morbid Anatomy of the Mucous Membrane.

CHRONIC PERITONITIS.

Chronic Peritonitis is sometimes the relict of Acute Peritonitis; and on the contrary, the Acute sometimes arises out of the Chronic. In the management of Acute affections it is a duty not to leave patients or to allow them to go about while a latent spark of inflammation remains, for that spark may either slowly consume the organ in which it is seated, or it may be suddenly kindled up into the highest degree of Inflammation a second time. On the other hand, Chronic Inflammation requires to be watched, not merely for the purpose of daily reducing it, but of being ready promptly and effectively to meet an Acute attack, if such should supervene, as time is then so valuable, that if much of it be lost, no future skill can retrieve the error—can save the life of the patient. There is no fraction of a day in law; but the fraction of an hour is sometimes so important, in the practice of physic, that, unless it be duly taken into the account, it makes all the difference between life and death.

In Chronic Peritonitis, the face and whole surface is generally pale, and the flesh wastes; the abdomen being large, and the extremities thin. The abdomen is not only tender and painful to the touch, but it is distended and hard. The pulse is jerky, and the tongue commonly covered with a whitish fur. If any fever be present, it is the most distinct in the evening or during the night. The urine is scanty and high-coloured. Motion of the body aggravates the pain, and makes the respiration more or less frequent and anxious. In some cases, the stomach is irritable, but in others, it retains bland food without inconvenience. When ascites takes place, the inflammatory symptoms are occasionally removed, but in the majority of examples, they remain under a mitigated character. If but little serous effusion should occur, and the coils of the intestines be united together by the organization of the lymph poured out between them, such adhesion may be suspected, by a lobgulated or irregular feel of the Bowels under the hand when passed over the abdominal integuments; by a sense of weight, constriction, and confinement within the belly; and by the pain being considerably increased under the operation of a purgative. It is always difficult, and frequently impossible, to predicate that Tubercles exist on the serous membrane of the Bowels. But when the skin assumes a delicate hue—when the conjunctiva is blanched—when the expression of the face is more softened and pensive than natural, and especially when the patient has any cough, a presumption of their existence in the Serous membrane of the Bowels might be excited, if any irritation existed in that texture. In thin subjects I have sometimes felt the Tubercles through the integuments of the belly, by pressing the fingers deeply inwards, and then pushing them across, by slow advances, from one side to the other, till the whole of the abdominal regions were thus examined. In one case, some of the Tubercles felt like small peas, and were found nearly of that size, after its fatal termination. The cellular membrane of the abdomen is sometimes drawn into little round irregularities, which may be distinguished from Tubercles of the peritoneum simply by their superficial situation. At the same time I do not wish it to be understood, that Tubercles on the peritoneum can always be detected by pressure; for, unfortunately cases have occurred in my own practice, which fully demonstrated that they might exist there, without being thus discoverable. It was mentioned, that ulceration of the Mucous membrane of the Bowels sometimes suddenly terminates by an attack of Acute Sero-Enteritis; and as I have seen the same thing happen not only from the irritation of Tubercles on the peritoneum, but from some organic diseases of the uterus, the fact is deserving of attention in the delivery of the prognosis. In one case of Fungus, death was caused in the same manner. The patient was a middle-aged man. He had been long subject to soft Cancer or Fungus of the testicle. He became liable to attacks of bowel-complaint, which resembled Cholic. On deep pressure, irregular tumors could be felt, as if connected with the intestines. He was suddenly seized one day by Sero-Enteritis, which soon proved mortal. Several true fungous growths were found attached to the Bowels. But, of course, an opinion as to the precise nature of the adventitious formation in apparently similar cases, would be little better than guess-work, unless, indeed, the external evidence co-existed; and that might be considered as a tolerably accurate guide, since Fungus is so apt to be seated in more than one part of the body at the same time.

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