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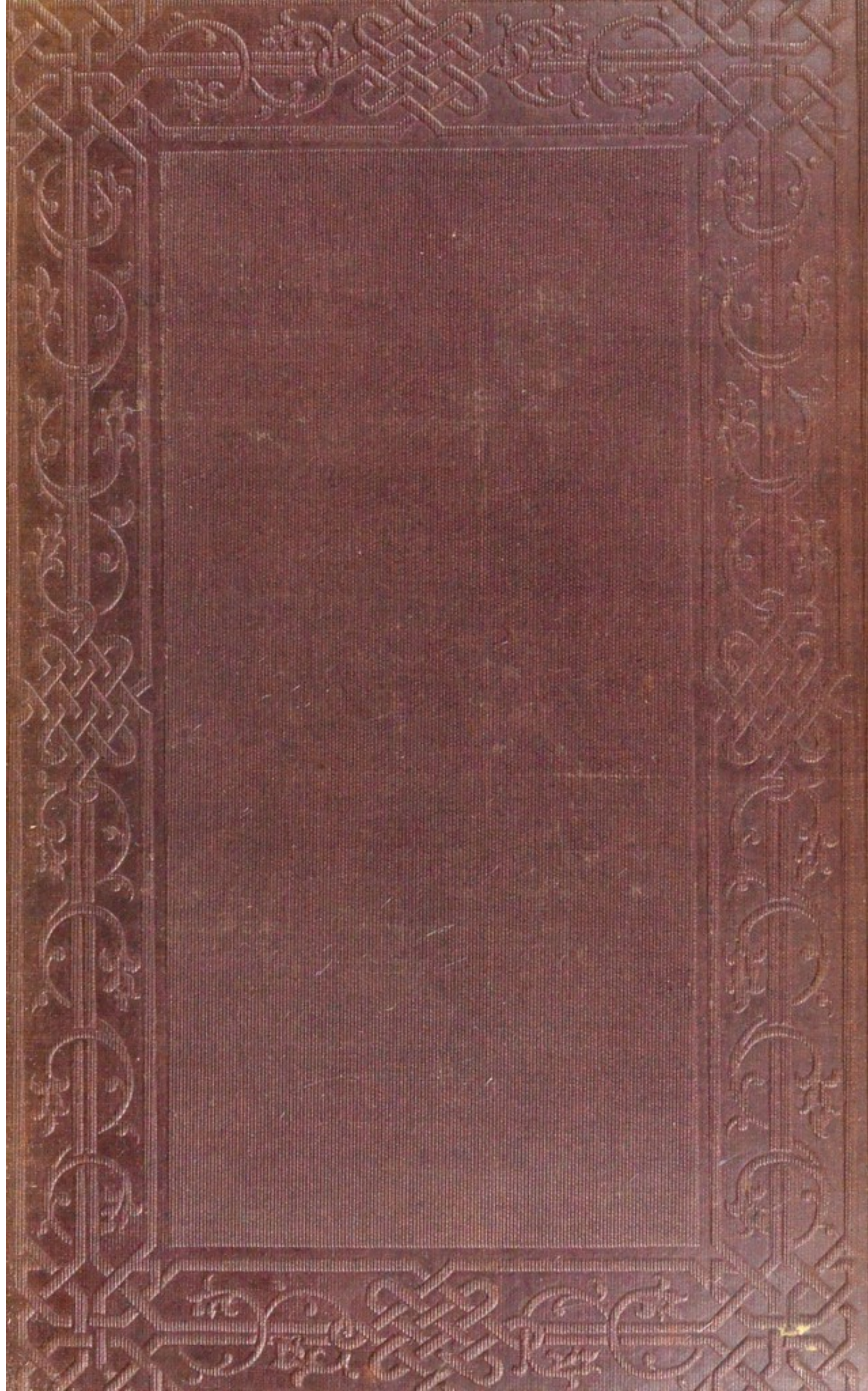
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PRACTICAL OBSERVATIONS
ON
SOME OF THE
DISEASES OF THE STOMACH
AND
ALIMENTARY CANAL.

BY

JAMES ALDERSON, M.D. F.R.S.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS;
LATE SENIOR PHYSICIAN TO THE HULL GENERAL INFIRMARY,
AND FORMERLY FELLOW OF PEMBROKE COLLEGE, CAMBRIDGE.

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P R E F A C E.

I AM desirous to take advantage of the form of a Preface, to disclaim pretensions which have not formed part of my views in composing the following pages. This desire has arisen in consequence of some observations made by a highly competent and judicious friend, who has done me the kindness to look over the proof sheets. Briefly, then, I claim neither the character of a discoverer, nor of a theorist, nor of a proposer of any particularly novel or specific plan of treatment. I have written in the belief, or at least the hope, that the result of extensive observation, classified and reasoned upon, would be found useful; and I have been encouraged thus to publish the sum of my own experience, in one class of diseases, by knowing how rarely it occurs that a physician is able to pause in active life, and review the materials which he has made his own. To keep the work in a concise and convenient form, I have avoided

making it a compendium, in the course of which I should have had to review all the valuable contributions lately made to this branch of disease by my own countrymen, as well as by French and German authors. I have simply stated what I have myself observed; and though, of course, I deduce inferences from my observations, I abstain as much as possible from speculating, or propounding any new pathological opinions. I must at the same time request the indulgence of the reader, to supply throughout a parenthetical expression, of which the constant repetition would have been inconvenient: thus I hope it will be understood, that when I simply assert facts, I mean only that they are so according to my observation; and when I draw conclusions, I merely mean that such are my deliberate opinions. I trust, if this be borne in mind, I may be acquitted of dogmatising too freely.

The morbid preparations from which the drawings have been made, are all deposited in the Museum of the Hull and East Riding School of Medicine and Anatomy.

London, December 30th, 1846.

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ON
DISEASES OF THE STOMACH,
&c.

PART I.

ON SOME OF THE STRUCTURAL DISEASES OF THE
STOMACH AND ALIMENTARY CANAL.

CHAPTER I.

INTRODUCTORY REMARKS.

It is curious to observe that, at the present time, when scientific pursuits in general are valued only according to the measure of their practical utility, in the study of medicine alone there appears a disposition to theorise. While philosophers are absorbed in the most abstruse enquiries and minute

investigations, still the progress of medical science, as regards knowledge of disease, seems scarcely traceable : and, though the profession is at present happily adorned by men whose eminent success has been earned by high attainments both in learning and skill, we have, notwithstanding, to regret the infrequency of contributions to that store of observations on the nature and progress of disease, which can alone form the basis of any enlightened system, whether of remedial or palliative treatment.

We cannot doubt that, as far as regards some of the collateral sciences, the medical enquirer of the present day starts with many advantages not possessed by his predecessors. The knowledge of minute anatomy and physiology has greatly advanced during late years, whilst organic analysis in the hands of the German chemists promises to explain many physiological changes, hitherto very imperfectly understood.

The field of enquiry now so diligently cultivated by the German professors, is, we must confess, highly alluring. It constantly yields a rich store of accumulating facts, and admits a satisfactory

process of investigation, more analogous to the method employed in the study of the exact sciences than to that pursued in former medical researches. The uncertainties, anomalies, vague speculations, and unsatisfactory conclusions, which perplex the study of medicine, have sometimes rendered it but an irksome pursuit to minds trained to the accurate and conclusive processes of mathematical demonstration. To myself, as to many others, the German School would therefore offer many attractions; but I can perceive some grave reasons why the practical physician (at any rate in the present stage of the advancing investigations) should not abandon the keen observation of disease and sound induction of accumulated facts, for the sake of framing a practice on partially established laws and newly constructed theories. With the greatest respect for the masters of German philosophy, and the highest estimation of their many great discoveries in chemical analysis, I yet fear to see the medical world of England giving themselves too exclusively to a line of study which to the incautious or enthusiastic may afford

“No light, but rather darkness visible.”

Many wonderful and startling results have been brought to light by chemical analysis, but the extent of these discoveries only shows the vast depths which have yet to be fathomed before arriving at any law on which medical practice can be firmly based. The existence of compounds mentioned by Liebig under the names of "Isomeric" and "Polymeric," showing that chemical analysis has led to the discovery of actual identity of composition in substances of widely different properties, proves that a law yet remains to be discovered which regulates their external form and character. This, taken as an instance of the yet existing imperfection in organic analysis, should restrain us from trusting too hastily to chemistry for our guide in the practice of dietetics : and should the most perfect chemical knowledge be acquired, there would still remain a difficulty in the attempt to form a theory of disease founded on chemistry, a difficulty, namely, in that almost unapproachable subject, the influence of vitality on chemical change in organised beings.

The human frame is not a mere machine, but a living being, gifted with peculiar powers adapted

to the high and especial purposes for which it was created; and if we refrain from approaching the spiritual mystery of man's three-fold nature, and regard him only as enjoying in common with the brute creation a mere animal existence, the same difficulty still presents itself. The animal frame exists through a power which has yet to be super-added to the perfect contrivance of mechanical and chemical construction. The machine, however perfect, has yet to receive the incomprehensible essence of life, before it can fulfil its ordained purposes; and we can no more apprehend the influence of vitality on the chemical changes in the component parts of the body, than we can analyse the power itself or comprehend its union with the wonderful mechanism which it animates.

The medical philosopher of future ages may pursue his work by the full light of many discoveries, now only dawning on the world, but no prudent man would at present trust himself to partial glimmerings insufficient for safe or useful guidance. Whenever we can find chemical conclusions borne out by practical experience, I would gladly seize on them for application. My own observation,

however, has led me continually more and more to appreciate that course of study which yields immediate practical utility,—a course of industrious observation of minute as well as general characteristics of disease,—classification of established facts—and unprejudiced reasoning upon them.

It appears to me, therefore, that the result of individual experience, with observations in any degree illustrating the nature and progress of disease, is an offering which the medical profession are likely to regard favourably, and to which they will generally ascribe a certain value. Trusting that my contribution in this kind, however small, will be indulgently received, I proceed to offer the following remarks on some of the diseases of a particular set of organs.

The materials have been collected during an arduous course of practice for sixteen years in a provincial district: the unremitting labour which has furnished me with these data, has also deprived me of the opportunity to arrange either the facts or my conclusions upon them into a form available for the consideration of others, and to do so

I have now taken advantage of the comparative leisure consequent on a change of residence.

Though much which I shall advance has been already noticed in previous works, I shall not delay the progress of my remarks to quote corroborative authorities, nor to combat opinions where I may not exactly coincide with views already propounded. I am aware that in the form of a compilation I might have produced a more complete history of disease; but on the principle above alluded to,—the value of individual observation,—I shall prefer to state only my own actual experience and deductions arising from it.

The set of organs which I have selected for observation is the stomach and alimentary canal: there are many reasons why I prefer this subject for consideration among the various materials supplied by an active professional career.

That the stomach is the organ of primary necessity to animal life has been proved by the researches of comparative anatomists. They have found that every living animal which has come within their range of examination is furnished with an organ for the purpose of nutrition: they

have discovered animals unfurnished with a brain, but none without a stomach. Even the acephalocyst, which is perhaps the lowest in the scale of organised beings, and which has been brought forward to contravene this assertion, is in fact no exception to this law of animal life; for if the laminated membrane of which this animal consists be analogous to any organ of our frame, it is most nearly so to the stomach. The acephalocyst may therefore be looked upon simply as a stomach, having a power of reproduction of the simplest form situated between its laminae.

In the human subject the importance of the stomach is pointed out by the daily experience that a due supply of nourishment is indispensable to the preservation of life and strength: it is also evidenced by the abundant distribution of nervous energy which is assigned to it: and perfect union of consent between the action of the lungs and stomach is the result of this careful and liberal endowment of nervous energy.

Commensurate with the importance of the organ are the number and severity of the diseases and derangements to which it is subject:

a very large proportion of the disorders and discomforts to which life is subject are the result of its functional derangement, and it is the seat of the most formidable and hopelessly incurable of diseases, when structural disorganisation takes place. This disease, in the progress of disorganisation, is often obscure in consequence of the involvement of the other viscera; and exactly in proportion to the hopelessness and fearfulness of the complaint is the importance of being able to distinguish accurately between it and its less formidable imitator, the merely functional derangement.

The power of discriminating clearly the existence and precise nature of the various diseases of the stomach is a point of great value to the physician, and I have been led to think that on this subject there is yet a space to be supplied in medical literature. I propose to treat chiefly of some of the structural diseases of the stomach and alimentary canal, and I shall afterwards take a more cursory review of the functional derangements.

CHAPTER II.

OF CARCINOMA OF THE STOMACH AND ŒSOPHAGUS.

CARCINOMA consists in the deposit of a morbid material in the cellular tissue of certain organs, by means of which the natural structure is displaced, and the affected part degenerates into a disorganised mass identical in structure with the original deposit.

I do not propose to discuss minutely the question of the first origin and development of the diseased deposit. Could this point be fully determined, it would undoubtedly be valuable as a fulcrum of truth, on which to rest our further observations: but in the present state of science we are not enabled to decide upon it.

The theory first proposed by Schleiden of the construction of vegetable tissues; adopted by Schwann in regard to those of animals, and afterwards most diligently pursued by Müller in a course of micro-

scopic observation, is now fully understood by men of science, and very generally accepted. The discovery of cells and nuclei, with their accompanying granules, and their mode of propagation, closely resembling the development of Hydatids, is, as far as it goes, satisfactory and highly interesting; but the minuteness of the differences as yet ascertained between the formation of morbid growths and of healthy tissues, whether in the human body or in vegetable life, warns us that there is yet something for science to reveal before we shall be in full possession of the nature of pathological structure. Should we suppose this system of Müller to be clearly followed out and established, the original source of the germinal cells, and the cause of their deposit, will still remain a point beyond our power of explanation. Reasoning, as we must, upon the clearly-established fact that these deposits take place in the stomach only at some period of declining life, we shall be left with two hypotheses to choose between: we must suppose, either that these cells are always existing in the system, and only permitted to develop themselves by failure of a healthy vigorous state of the

tissues in which they are deposited, or that they are first received into the system by an error of nutrition at a time when the whole organism has no longer a tendency to restore and replace as in the earlier stages of life.

In a practical work we must be content to stop at this point of the enquiry. We have this satisfaction, at least, that one useful fact is demonstrated relative to the commencement of the disease. In the course of our observations it will appear that the morbid development in a form of disease akin to carcinoma has taken place from local irritation, and whether it arise, as in one case which will be cited, from the accidental introduction of a foreign body, or, as in others, from irritation set up by the use of stimulants,—this fact, that local irritation may give rise to the first development, may be usefully applied as a monitor to induce both caution and habits of prudence in individuals.

Leaving the obscure philosophy of carcinoma to future pathologists, there is, in the mean time, much to be learnt in detecting the disease in all its forms, and much to be done in alleviation of

the symptoms as they arise, or, at least, in protecting the sufferer from the harassing effects of treatment founded on false premises.

Of the various forms under which carcinoma attacks the stomach, there are two which, though usually considered as varieties of the same disease, tend to such different results when situated at either orifice, that I am induced to consider them separately. I am willing to admit that they have a common origin, and are only modified in their progress by incidental circumstances.

One of these forms tends to close the orifice or outlet by the deposit of a dense cartilaginous-like material, constituting scirrhus stricture (simple carcinoma). This form (scirrhus stricture) has very little, if any, of a softer material in its composition, and, when it is ulcerated, the abraded surface is small, and the ulceration superficial. The effect of the deposit is occlusion of the orifice, whether of the cardia or of the pylorus.

The other form, however the deposit may have first commenced in the part, is found, after death, in a softened, ulcerated state, and the outlet is comparatively open. The deposit is of a mixed

character, varying in density from that of scirrhus to the softness of brain or pulp: and the ulcerated surface is always extensive, and covered with fungous projections. This form is called areolar* carcinoma.

However true it may be that these varieties are originally identical, and only in their subsequent development modified by incidental circumstances, I think it better to consider them separately, and endeavour, by a comparison of the symptoms during life with the appearances after death, to accumulate signs by which we may be able to distinguish them from each other in the living subject. Both varieties are alike constitutional, and both, when developed in certain situations in the stomach, are attended by the secondary deposit of encephaloid or medullary matter in the other

* *Alvèolare* or *arèolare*, both referring to the cell form of part of the deposit, do so in a correct sense. *Colloid* and *gelatiniforme* (meaning gellylike, and applied only to a part of the deposit, viz. to the contents of the cells,) do so incorrectly, as the contents are not gelatine, but albumen. *Alveolar*, or *areolar*, seems to me, therefore, to claim a preference above the words *colloid* and *gelatiniform*. They have all been used by French and German pathologists, and adopted by the English, to designate this form of carcinoma.

viscera, especially in the liver: the particular situations will be hereafter indicated. The secondary deposit in the liver consists always of a soft homogeneous matter dispersed throughout the organ in the form of tubera, which, from their consistence, have been called encephaloid or medullary.

In consequence of the mechanical functions performed by the orifices of the stomach, which, when in a natural state, and not in action, are always contracted, we find the coats at the orifices to be composed of a denser and more compact structure than the rest of the stomach; and it may be to this peculiarity of structure that we must attribute in them the prevalence of the scirrhus form of carcinoma, uncomplicated, or nearly so, with areolar deposit, a supposition borne out by the fact that we never meet with scirrhus in its simple form in the larger curvature of the stomach.

It is true that scirrhus stricture is met with in the œsophagus, but the whole length of the tube has similar action and structure to those of the orifices; and in its natural state it is also contracted. The natural state of the stomach is one

of partial dissension ; it forms a contrast, therefore, in this particular, to the contracted condition of the cardiac and pyloric orifices, and of the œsophagus ; and hence the stomach may be supposed, from the little resistance which it offers to the deposit of cancerous matter within its cellular tissue, to allow the material deposited to assume a softer character. We perceive analogous effects from pressure on fungous growths which, when unopposed, expand into a looser texture, and are more rapidly produced.

We meet with scirrhus stricture, then, only at the orifices of the stomach, and in the œsophagus ; but the other variety, areolar carcinoma, is met with not only in these localities, but also in the larger curvature of the stomach, and always in a state of extensive ulceration. The ulcerated surface, with its fungous excrescences, pours out large quantities of vitiated secretion, sometimes but little changed from venous blood, and frequently thick and grumous, like coffee-grounds, and very offensive.

We are often enabled by the symptoms to distinguish the situation of the cancerous deposit in

the stomach; but it is also true that cases are met with, and not unfrequently, in which those signs or symptoms which, when they do occur, are considered as almost pathognomonic, are altogether absent, or so subdued that even the experienced practitioner finds it extremely difficult to decide on the nature of the disease.

CHAPTER III.

CARCINOMA OF THE CARDIAC ORIFICE OF THE
STOMACH.

WHEN simple carcinoma (scirrhus) has its seat in the cardiac orifice of the stomach, it is in vain to seek evidence of its presence by means of examination by the hand. The stomach is so bound by the œsophagus to the diaphragm, and so protected by the sternum and the cartilages of the ribs, as entirely to preclude all such examination: and as most of the symptoms equally belong to simple carcinoma situated higher up in the œsophagus, it would be desirable to observe some discriminating marks to indicate the diseased point. There is one symptom, consisting of a bag or pouch, which is apparent in the throat after deglutition, the absence of which affords at least negative evidence in favour of the stricture being at the cardia. This symptom will be more particularly noticed when treating of the œsophagus, to which position

of the disease it properly belongs. I believe nothing but the careful introduction of a bougie can decide the exact position of the stricture; but I am not aware of any practical good to be gained by ascertaining this point, which is at all commensurate with the danger of injury by the operation.

When the disease is of the areolar form, deposit takes place in much larger quantity than in the scirrhus form. The mass is greater, and it usually extends into the cardiac extremity of the stomach, where it freely ulcerates. In this case, a careful examination by the hand seldom fails to detect tumour, which can be felt at the pit of the stomach, though its limits cannot be readily defined. Here, on pressure being made by the hand, great pain is experienced, although the examination be most carefully conducted.

In areolar carcinoma of the cardiac orifice of the stomach, and also of the œsophagus, we find that nourishment can sometimes be passed into the stomach, and sometimes it cannot: this may be accounted for on the supposition, that different states of sensibility of the ulcerated surface admit the passage of food more readily at certain times

than at others ; but, independently of this, we may also reasonably infer, that, when there is a large deposit of soft material and the surface ulcerated, the supply of blood, to certain portions of the mass, may become interfered with, as by pressure from neighbouring deposits, and that in consequence, small portions (at all times imperfectly supplied with blood and held together) die and slough off. The passage into the stomach will thus, for a time at least, become more pervious, and food which was at one time rejected, may again find space to pass into the stomach.

In either form, when the disease is at the cardiac orifice, the food is usually rejected immediately after it is taken. The common saying among hospital patients is, "that one mouthful brings another up," which mode of expression, though rude, is almost literally true, since the distension of the œsophagus by a second mouthful causes the whole to be immediately rejected. This is sometimes accompanied by a sense of suffocation : the patient feels the food go to a certain spot, and then stop : pain is immediately experienced at that point, and vomiting succeeds. The pain is of a dull, aching

kind, and strikes through to the back and between the shoulders.

In the earlier stage and progress of the disease, vomiting does not occur invariably after taking food, but it is never absent during many days together; the interval gradually diminishes as the disease advances: when stricture takes place, vomiting becomes a constant symptom, always following immediately when nourishment has been taken. The food then returns in the same state as it has been swallowed, or mixed with ropy mucus, secreted by the lining membrane of the œsophagus. Ultimately, even liquids will not pass into the stomach, and the patient having subsisted upon his own fat, at last dies, emaciated, of starvation.

I believe there is no instance where fat has been found in the parietes of the abdomen after death from true scirrhus of the cardiac orifice of the stomach, and hence emaciation with the other symptoms is conclusive of the fatal character of the disease.

In both forms of the disease, the pulse is quite natural, the tongue almost always clean, until

when, in the later stages, aphthæ point out the approach to a fatal termination: the bowels act but scantily, as might be expected from the small quantity of food received, but diarrhœa often attends the close of life.

The state of suffering arising from the pressure of scirrhus stricture in the cardiac orifice of the stomach, as also in the œsophagus, is more intense and complicated than when the disease is situated at the pylorus. In this case life is not sustained sufficiently long for the disease to destroy by a gradual giving way of the general powers. The patient dies a sort of violent death from the fearful combination of starvation and suffocation. The suffocation takes place when the disease extends into the windpipe, which is nearly always the case.

Again, in the pyloric disease the stomach is able to receive nutriment, and digestion is carried on, at least to a certain extent; the calls of hunger are supplied, and though after the lapse of two or three hours, the pultaceous mass will in all probability be rejected, still some portion of nourishment will have been extracted from it: but in the cardiac stricture, and in that of the œsophagus, the cravings of the appetite are fearfully distressing, hunger is

experienced in the extreme ; the stomach and organs of digestion are ready to perform their proper functions, yet there is no possibility of introducing food beyond the strictured point. Bland liquid can be received into the œsophagus, only in proportion to the capacity of the tube, and it will be retained there only until the strictured portions of the tube are excited by its pressure to reject it : there is no other way of supporting life, except through the bowels in the form of lavement : patients thus suffering die emaciated ; but the period of life may be prolonged by a store of fat in the system. The degree of tranquillity enjoyed by the patient, the temperature of the air, and the degree of power to swallow water, all influence the time during which life may be sustained.

I shall select illustrations from cases which have occurred in my own practice ; they include examples of most of the varieties of carcinoma : in remarking on the symptoms, I propose to compare them with the appearances after death ; thus, not only tracing to their cause such as have been present, but at the same time accounting for the absence of others which usually accompany the

disease, and which, when they do so, are considered almost pathognomonic.

SIMPLE CARCINOMA.

Case No 1.

Ulcerated scirrhus stricture of the cardiac orifice of the Stomach, attended with vomiting, no tumour to be felt during life. No secondary deposit of encephaloid matter in the liver or other viscera: great emaciation.

George Ellesby, aged 62, a farm labourer, was admitted an in-patient into the Hull General Infirmary.

He was extremely emaciated. His complexion was very dark, but not of the hue usually consequent on the absorption of bile; the adnata of the eye was pearly.

He had long laboured under "heartburn," and other evident symptoms of disordered stomach, and had undergone a variety of treatment. He usually vomited everything immediately after he had swallowed it, and complained of great pain at the

pit of the stomach and in the throat, accompanied with acid eructations. His tongue was quite clean: his pulse rather quick, and very small: his bowels were confined. As he lay in bed, from the amplitude of his chest, and the collapsed state of his abdomen, he appeared to be deformed, which he was not. On the most careful examination by the hand, no tumour could be detected during life. When liquids would no longer pass into his stomach, his only gratification was derived from swallowing, now and then, about an ounce of milk. This he described as passing no further than a point between his shoulders, in about a line with the cardiac orifice of the stomach. The milk would there lie for a quarter of an hour or less, and then return unbroken or uncurdled, having never reached the gastric fluids.

He died emaciated in the extreme, ten days after his admission into the hospital.

Examination of the Body twenty-four hours after death.

The body was extremely attenuated. The abdomen was singularly collapsed on the spine. On

examining the chest, the heart and lungs were found healthy.

On opening the abdomen no fat was found in the parietes. The stomach was very small, and contracted. The cardiac orifice was found to be the seat of scirrhus stricture (simple carcinoma): a probe could with difficulty be passed through the orifice. The deposit of matter constituting the stricture was of cartilaginous hardness throughout; the surface of the stricture, corresponding to the interior of the stomach, was in a state of ulceration, having small fungous projections; but the ulcerated surface was not of large extent. The mucous lining of the stomach and of the duodenum was of a dark slate colour, as seen in plate No. 1. The liver was much darker than natural; it was full of dark blood, but contained no secondary deposit of encephaloid matter. The veins of the abdomen were full of blood.

Case No. 2.

Areolar carcinoma of the cardiac orifice of the Stomach extending into the cardiac extremity of the organ. — Vomiting. — Emaciation. — No encephaloid deposit in the liver or other organs.

John Chevin, aged 63, an out-patient at the Hull General Infirmary.

When he first presented himself at the hospital he was already somewhat emaciated, and complained of great pain at the pit of the stomach, and of vomiting his food as soon as he swallowed it; even liquids sometimes immediately returned. He stated that his impression was that his stomach was "closing up," and that nothing which he took as food ever went into it: he was much troubled with what he called "heartburn and indigestion." Phlegm freely rose up into his mouth and throat, and he had a slight cough. His tongue was quite clean. He stated that he had felt his dyspeptic symptoms for nearly two years, during the whole of which time he was much troubled with indigestion and occasional vomiting of his food. His food

used to return just as he swallowed it. In the earlier part of his complaint he used to be several days without vomiting, but of late the vomiting was constant. He could sometimes swallow small pieces of the fat of bacon toasted, without their being vomited, and at a time too when liquids returned.

On careful examination at the pit of the stomach, a small undefined tumour could be distinctly felt: at this place he experienced great pain on pressure by the hand. A few days before his death diarrhœa and aphthous tongue supervened.

Examination of the Body twenty-three hours after death.

The body was extremely emaciated.

In the chest, the heart and lungs were healthy. In the abdomen, the colon was much distended with air. At the cardiac orifice of the stomach a tumour was found of the size of a small orange. The coats of the œsophagus and stomach, when cut open, were found much thickened (see Plate No. 2.), the thickening extending to about an inch above the cardiac orifice: the orifice freely admitted the

little finger. The section of the tumour shows the peculiar characters of areolar carcinoma, having scirrhus and soft material intermixed.

The thickness of the coats, from deposit and swelling, was but little less than half an inch. The mucous coat below the stricture was in a state of ulceration with red elevated points surrounding the ulcerated portions. The deposit of cancerous matter extended into the cardiac extremity of the stomach; and the ulcerated surface was coated with mucopurulent secretion. The pylorus was healthy. The liver was healthy, without any deposit of medullary or encephaloid matter.

In this case it is to be observed from the drawing, that the disease is bounded by a distinct line in the œsophagus; and although there may be no great practical utility in determining the precise limit in this direction, since all parts of the œsophagus are obnoxious to carcinoma, still it may be interesting to consider whether alteration of structure at this part may not have determined the boundary to the disease, and placed a check to its progress up the œsophagus. The supposition

of disease being bounded by difference in structure, is exemplified in the case of osteosarcoma, which, when it has passed the fibrous periosteum, changes its character, and becomes medullary sarcoma.

The usual extension of cardiac disease, as far as my own observation goes, is always into the cardiac extremity of the stomach.

CHAPTER IV.

CARCINOMA OF THE ŒSOPHAGUS.

I HAVE said that the disease, both as scirrhus stricture and areolar carcinoma, is obnoxious to all situations in the œsophagus. The symptoms resemble very much those which accompany disease of the cardiac orifice of the stomach.

In the scirrhus form the seat of pain, especially when the stricture is high up in the tube, will generally point out the true situation of the deposit. As the disease advances, the quantity of food able to be taken into the œsophagus is very small. Immediately after deglutition there is a remarkable bulging out or protrusion of the œsophagus above the strictured point: it is in fact a bag or pouch which is formed by the effort of the patient to swallow a larger quantity of food than the œsophagus in its natural state can contain: the opposition made by the stricture to the advance of the contents, and the contracting power of the

pharynx, combine to distend the œsophagus above the stricture and to form the pouch. Patients sometimes flatter themselves that they are receiving food into the stomach, but it very soon returns, nearly in the same state as it has been taken. More mucus is secreted than can be swallowed, and the patient is much distressed by what he calls the "rising of phlegm" in his throat. Emaciation to the last degree takes place before death; and a sense of suffocation attends the effort to swallow. The great difficulty in swallowing and the sense of suffocation in making the attempt, the immediate vomiting succeeding the act of swallowing, the particular situation where pain is experienced, the pouching, and the great emaciation, are the distinctive characteristics which mark the scirrhus form of the disease.

In areolar carcinoma of the œsophagus pain and difficulty are always experienced in swallowing, but vomiting is not a necessary symptom. Food can be passed into the stomach, and when there, can generally be digested without vomiting being excited: hence, that extreme emaciation, which distinguishes the simple carcinoma, or scirrhus of

the œsophagus, does not take place. The extension of the disease is into the trachea, in consequence of which, efforts to swallow bring on a sense of suffocation—a spasmodic dysphagia, from the effects of which, after a struggle, the whole that has been swallowed is rejected. The following is an example of the simple form of carcinoma.

Case No. 3.

Scirrhus stricture of the Œsophagus.

M. I., aged 50, a poor Woman.

When she was taken into the hospital she complained of not being able to take any food into her stomach; whatever she took returned almost immediately,—she felt convinced that her throat was “growing up.” Her complexion was very sallow; her abdomen quite collapsed: she was exceedingly emaciated. At her own request the house surgeon attempted to pass some arrow-root into the stomach, but without success; it returned from the mouth as fast as it was supplied by the syringe; she complained of great pain at the seat of the stricture during the time of this operation. Her

tongue was clean. She died a fortnight after her admission, literally starved to death.

Examination twenty-four hours after death.

The body was exceedingly emaciated.

On examining the seat of the stricture, a deposit of hard cartilaginous-like matter was found extending for several inches along the œsophagus, commencing about half-way down to the cardiac orifice of the stomach, and very nearly reaching the orifice. The tube was so narrowed by the cancerous deposit, that a probe could with difficulty be passed along it. The whole length of the lining membrane of the strictured part was in a state of merely superficial ulceration; yet a section of the coats showed the characteristic partitioning of areolar carcinoma as may be seen in Plate No. 3. There were several small pouches at the inferior part of the ulcerated membrane, in one of which an orange pippin or seed was found, in another a couple of shot corns. She had stated that she had swallowed these articles at the suggestion of neighbours, in order to force a passage; and her impres-

sion had been that they had passed into her stomach, having never vomited them.

Among other cases of which I have notes, I find one of Mr. R., of the Coast-guard, who died of this disease, recorded in the very expressions he made use of: His heart, he said, was as good as ever, but his strength failed him. If his stomach could be got into, he felt as if he could be again as strong and as vigorous as ever. He was most vehement in his entreaties that something should be done to get nutriment into his stomach, and declared himself willing to endure any operation I would recommend. He expressed none of the sinking feeling from debility which is so marked a symptom in disease of the pylorus, and the larger curvature of the stomach, when the liver and other viscera are secondarily affected.

Case No. 4.

Stricture of the Œsophagus, attended with vomiting and spasmodic dysphagia, extension of the disease into the trachea—no secondary deposit in the liver or other viscera—great emaciation.

Mr. S——, aged 48.

I saw him for the first time rather more than six months before his death; I visited him at that time at his office, which was distant a mile from his residence, and to and from which he walked daily, without inconvenience. He was fully able to transact business. He stated that some time previously he had suffered from what he called influenza, and had been leeches to relieve his throat. He subsequently had experienced a difficulty in swallowing, with pain and a sense of great constriction in the throat. He had also a feeling of suffocation on taking food; it gave him the sensation as if, to use his own words, it had gone "the wrong way," that is, as if it had entered the trachea. I found him still suffering from the difficulty in swallowing, which apparently caused more

distress than would have arisen from the mere pressure of a distended œsophagus on the trachea. He was considerably emaciated at this time, although it was several months prior to his death. His countenance was anxious, and his complexion dingy and opaque; his pulse was quite natural and his tongue clean; his bowels were confined. No tumour could at this time be detected.

During the six weeks that I attended him local depletory measures were used, with the faint hope of retarding the extension of the disease to the windpipe, although at the time no doubt occurred to me of the existence of carcinomatous deposit. The difficulty of swallowing continued to increase, though he was able at times to swallow both breakfast and dinner, but more frequently he vomited his food as soon as he had swallowed it, and always had the sensation of its stopping at a point in the throat opposite to the articulation of the clavicles with the sternum; the food caused pain at that point and was immediately rejected. The latter part of the six weeks his strength gave way so that he was unable to attend at his office.

As I was unable to flatter him with any hope

of recovery, he was persuaded by his friends to remove to London; where he was treated with antispasmodics, mineral tonics, with a course of mercurials, and by a mechanical dilatation of the œsophagus. He returned home in about three months, greatly emaciated, and died.

I give the following account of the *post mortem* examination as furnished me by Mr. Lowther.

Examination twenty hours after death.

The œsophagus with the larynx having been dissected and reflected from its vertebral attachment, the larynx was first opened. The entire mucous membrane, particularly about the rima glottidis, was much thickened, so much so as to lessen considerably the diameter of the larynx; it was covered with a thick, glutinous, chocolate-coloured coating, but had no perceptible evidence of ulceration. These appearances slightly extended to, and were gradually lost in the trachea. Tracing the œsophagus downward, the canal began gradually to expand until it had acquired an extraordinary capacity, presenting quite a pouch-like appearance: this accounted for the bulging in the

throat, which was observed in the act of deglutition.

Immediately opposite to the clavicular end of the sternum the coats of the canal had become thickened and indurated, and the calibre contracted, forming a stricture. The diameter of the tube was so diminished as scarcely to admit a tapering bougie; the cellular tissue connecting the larynx and œsophagus was entirely obliterated, and the two tubes were so completely connected as to render their separation impossible. A full-sized œsophageal bougie introduced into the canal immediately below the stricture passed with slight obstruction into the stomach; the remainder of the canal was found, however, to be healthy, the obstruction having been occasioned by an osseous growth projecting from one of the dorsal vertebræ.

There was nothing remarkable in the thoracic and abdominal viscera beyond a diminution in size and a general exsanguineousness. The stomach, as is usual in these cases, was much shrunk, but the cardiac and pyloric openings were perfect: it partook in a great degree of the pallid appearance that generally prevailed. The head was not opened.

AREOLAR CARCINOMA OF THE ŒSOPHAGUS.

Case No. 5.

Areolar carcinoma of the Œsophagus, with destruction of the coats, and extension of the disease into the trachea, spasmodic dysphagia, but little attenuation.

Mr. M—— of L—— in Lincolnshire, aged 72, of strong robust frame when in health.

I saw the Case in consultation with Mr. Barton.

I learnt as the history of the case that he had suffered pain in his throat for a long time, which he described as feeling a “sore spot” when he swallowed. About two years before this time he had swallowed a fish bone, which stuck in his throat at the point, at which he ever after felt the “sore spot.” He had for some time been distressed by disagreeable fetid eructations from the stomach; and though he had never vomited his food, had of late experienced violent spasms in his throat whenever he swallowed either solids or liquids. Spirituous liquors and hot fluids gave him exquisite

pain; I found him considerably shrunk from his former proportions, but not emaciated: he was spitting up a dark-coloured purulent mucus, mixed with venous blood, altogether of a very fetid smell. His inspiration was rapid, and air was taken in by the nostrils, that is, he "sniffed" air into the lungs every now and then, and by this mode of inspiration was able to introduce air more rapidly into the lungs than by distending the chest leisurely; he had a slight convulsive cough which teased him very frequently; his pulse was rather frequent and his tongue inclined to be aphthous; he was exceedingly restless at night and had never received much comfort from opiates. He was disinclined to be questioned, and was quite impressed with the belief that his disease would destroy life.

He died about a fortnight after this visit.

Examination of the Body by Mr. Barton, forty-eight hours after death.

The parietes of the abdomen were much loaded with fat.

On opening up the œsophagus, a large mass of areolar carcinoma, in a state of extensive ulceration,

was found exactly corresponding to the bifurcation of the trachea : it extended in all directions round the tube, and measured about three inches in diameter. The areolar deposit had destroyed the muscular coat, and ulcerated through the mucous lining over the whole surface, the thickness of the coats at this part being about half an inch. The deposit consisted of hard and soft matter intermixed, and the disease had extended itself to the trachea and to the apex of the right lung. The mucous lining of the trachea was deeply tinged with greenish red ; the membrane had given way in many places, having the appearance of cracks or fissures, through which the greenish secretion, from the ulcerated cancer, had found its way into the trachea. See plate No. 4.

On opening the chest the lungs were found in a healthy state, except where noticed above, in the apex of the right lung, which, from contiguity to the diseased part, had a slight deposit of medullary or encephaloid matter in it. The heart was flabby and soft.

In the abdomen, the liver was pale and softer

than natural: it contained no secondary deposit of encephaloid matter.

The stomach was quite natural and healthy, as were the intestines and spleen. The omentum was very fat.

REMARKS.

On reviewing the inspection in this case we can understand why the inspiration was so hurried: it might be a voluntary effort to shorten the period of pain which accompanied the act of inspiration; or it might be that by passing the air more rapidly by the spot in the trachea where the fissures existed, the air was in some degree preserved from the contamination which it would have suffered by longer contact with the fetid secretion.

The communication with the trachea by fissures and the escape of secretion into the windpipe, fully account for the spasmodic cough with which he was tormented. From the large amount of fat in the body, it would seem as if death had taken place in this case earlier than might have been expected, had some organ less vital than the trachea been encroached upon.

AREOLAR CARCINOMA OF THE PHARYNX.

Case No. 6.

Great difficulty in swallowing. — Extension of the disease to the trachea.

Mrs. D——, aged 68.

I saw her in consultation with Mr. Dosser. I found her in bed with a most anxious countenance. She appeared much emaciated. She told me that she had not been well since the year before, when she had had influenza. The most alarming symptoms now present were those of laryngitis supervening on the extension of disease from the œsophagus to the larynx. She complained that something in her throat, which she described as a "shelf," prevented her from swallowing, and she had a fearful feeling of suffocation whenever she made the attempt. She was restless, and was teased with cough and a frequent expectoration of mucus which rose in her throat. On taking the least nourishment, even a tea-spoonful of barleywater, it immediately returned, and with it a large quan-

tity of ropy mucus; the mucus subsequently became more of a purulent character. Her voice was feeble and altered, though shrill as if passing through a narrow opening.

On examining the throat, which was much swollen externally, the thyroid gland appeared much enlarged, and the cartilage was greatly advanced. Nothing could be seen on looking into her mouth but a large collection of mucus in the pharynx. Her pulse was small and quick; her tongue tolerably clean and moist. The symptoms of laryngitis became worse and worse, the difficulty of breathing increased, and she died a few days after I first saw her.

Examination of the Body twenty-eight hours after death.

(Permission was given to examine the throat only.)

The enlargement of the thyroid gland, which had existed for many years, appeared to constitute the great portion of the tumour in the throat. The pharynx was the seat of the cancerous deposit, which was ulcerated over its entire surface. The surface was irregular and presented the appearance

of the section of a honeycomb, across the cells. The form of the ulcerated surface was heart-shaped with the apex towards the cardiac orifice of the stomach; the sides extended so as to embrace the whole circumference of the pharynx; ulceration had extended itself slightly through to the lining membrane of the trachea where lymph was exuded. There were several small gland-like tumours on the right side of the neck, a section of which showed the contents to be curdy and medullary matter mixed.

There are frequent cases in which extreme suffering in the œsophagus appears at first to indicate the existence of structural disease. They are however found to belong to a different class.

I choose the following from a number of examples merely as an illustration. Mrs.——— aged forty, married, residing in the Holderness Road, near Hull, was seen by me in conjunction with Mr. Hardey.

She complained of great pain in attempting to swallow even liquids, and expressed her conviction that her throat was growing up: she had been ill only a fortnight, at the commencement of which

time she had inadvertently swallowed an angular peppermint drop. It stuck in the throat and caused considerable pain, since which time she had been unable to swallow anything; even liquids gave her excessive pain. The case had apparently been rightly understood by Mr. Hardey. He had used local measures to allay any little irritation which the angular form of the drop might possibly have caused, and then treated the case as purely nervous.

After much persuasion, she allowed a bougie to be carefully passed down the œsophagus, and from that moment all difficulty in swallowing ceased.

Can we suppose in this case that the lining membrane of the œsophagus was cut or lacerated by the angular bon-bon, and thus a spasm of the muscular coat of the tube induced, which, until artificially overcome by the introduction of the bougie, the patient had not power to relax? or are we to believe that the difficulty of swallowing was of a purely nervous character altogether, akin to what, for want of a better or more expressive term, is called Hysteria. It was quite evident that the obstruction or opposition to swallowing was not of a

structural character. There was no emaciation, and the disease had, according to her own account, apparently run its course to total obliteration of the passage, in the short space of a fortnight: these are symptoms wholly at variance with structural disease, but we may remember in the Case No. 4. I stated that it was the patient's impression that his complaint in his throat commenced from the time of his having swallowed a fish-bone which stuck in his throat about two years before. It can only be, therefore, by watching and recording such cases and their sequelæ, that we can clear up an opinion, held by many sound pathologists, that this is only the first, but accidental indication of the presence of disease of structural character to be hereafter developed; or as cancerous disease is of constitutional character, may it not be probable that the accidental irritation of the œsophagus by a foreign body, in Case No. 4., gave occasion for the first deposit of cancerous matter; the constitution being so disposed to the disease, that the smallest irritation was alone wanting to fix the locality. If so, such constitutions are in a state of what in the schools is called unstable equilibrium. They

are on the very verge of disease, and the slightest circumstance is sufficient to turn the scale, and throw them off their balance.

It has been often remarked, that one of the most prominent symptoms in carcinoma of the cardiac orifice of the stomach is the sense of suffocation, which occurs in the act of swallowing. The cases before us make it apparent that this symptom is not confined to cardiac disease, but is also one of the most marked symptoms of the later stages of carcinoma of the *œsophagus* and of the pharynx, when the disease extends itself to the trachea: as in Cases No. 4, 5, and 6.

It is evident in Case No. 5. that every effort to pass food down the *œsophagus* must have forced secretion through the ulcerated fissures into the trachea, where its presence would naturally cause suffocating sensations, as well as irritating spasmodic cough, which was also present. It is probable, however, that the sense of suffocation in swallowing, which occurs in disease of the cardiac orifice of the stomach, is due to a different cause. It is more likely to be the result of irritation of

the pneumogastric nerve, a large portion of which is distributed to the cardia.

But there is yet another observation which suggests itself in reviewing the foregoing cases of cardiac and œsophageal disease: the truth of which is borne out by all other cases of the kind which I have had to treat, viz., that the liver has never been the subject of secondary deposit of encephaloid matter. This deposit is, on the other hand, found in cases of ulcerated carcinoma of the pylorus, and of the larger curvature of the stomach, as well as in cases of carcinomatous deposit beneath the serous covering of the stomach, and in the pancreas. In all these situations the disease is identical, but when it is found in some particular situations, other organs of the body are affected with secondary deposit of medullary matter, and when it is found in certain other situations, there is no such secondary deposit.

The disease is undoubtedly constitutional, but it requires time before it can be developed secondarily in other viscera. When passages so absolutely and immediately essential to the support of life as the œsophagus and the cardiac orifice of

the stomach are first affected, life cannot be sustained long enough to allow the other organs to become morbidly tainted.

Another explanation of the fact may be suggested in the case of simple carcinoma with stricture of these parts. When the disease is thus situated, emaciation takes place to a great extent, and very rapidly: and the activity of the absorbents must, during this process, be greatly increased, since the whole, or nearly the whole, supply for the sustenance of life is to be derived from the resources of the body itself: every thing which can serve as an element of respiration is therefore removed to compensate for the want of a due supply of nutriment. This state would counteract the deposit of the morbid material.

CHAPTER V.

CARCINOMA OF THE LARGER CURVATURE OF THE
STOMACH.

CARCINOMA is always of the areolar form when it occurs in the larger curvature of the stomach. The deposit of carcinomatous matter is infiltrated into the submucous cellular tissue, and, as the disease advances, the mucous membrane becomes swollen and hypertrophied, and then ulcerated: the ulceration in these instances assumes a variety of irregular shapes.

Carcinoma in the larger curvature is attended by symptoms of dyspepsia in an aggravated form, by vomiting at variable periods after taking food, by the escape of fetid air from the stomach, and usually by great pain at the pit of the stomach, which is increased by the slightest pressure.

There is a sense of great debility. The countenance is very anxious, and the spirits depressed; the complexion is exsanguineous and opaque; the

tongue is always clean; the state of the bowels varies in different cases, but is usually confined.

In some few cases vomiting does not occur, and frequently, in the later stages of the complaint, it is superseded by "sour risings," by fetid "mouthfuls," which are brought up from the stomach.

Less pain is experienced in this situation of the disease than when it occurs at either of the outlets. Emaciation takes place, but not to the extreme extent which accompanies scirrhus cardia.

There is always deposit of encephaloid tubercula in the liver.

When the disease is confined to the larger curvature of the stomach, and the outlets remain free, nutriment can be passed into the stomach, and there is no opposition at the pylorus to its passage out; but the stomach, notwithstanding, finds difficulty in getting rid of the half-digested mass; for, though the pylorus is in no degree obstructed, there is a defective power in the coats of the stomach to contract upon their contents: the infiltrated state of the contractile coat, which soon becomes involved in the disease, accounts for this absence of power.

On examination by the touch tumour can always

be detected, which, as the disease advances, increases in size, and becomes less definite in form.

The increase of the mass, in this case, is to be attributed to the encroachment of an enlarged liver, and to subsequent adhesions between the liver, the stomach, and neighbouring organs. In consequence of the increase the position of the tumour is no longer to be distinctly referred to one spot; and that which was previously a comparatively distinct tumour, is superseded by a gradually increasing mass, which extends across the pit of the stomach, and below the cartilages of the ribs.

It is necessary to bear in mind when examining by touch, in order to ascertain the existence of tumour, that the stomach itself varies very much in form, according to the circumstances of the disease. When carcinoma has its seat at the cardiac orifice of the stomach, and food is consequently stopped at the orifice, the stomach, being always nearly empty, gradually becomes contracted, and its proportions altogether greatly diminished.

But when the situation of carcinoma is at the pyloric extremity, and when vomiting is absent,

great accumulation takes place. I have seen a case when vomiting was suspended for fourteen days, and nearly all the ingesta remained during the whole of this time in the stomach: a large wash-hand-basin-full was at length vomited at once. The stomach was to be felt in this case as a large fluctuating bag in the abdomen.

When carcinoma has its seat in the larger curvature of the stomach, I am not aware that the proportions of the stomach are much interfered with except by the additional size of the morbid growth.

In the course of examination of the abdomen, tumours of other parts are likely to interfere in forming a correct diagnosis. Of these, tumour of the pancreas is, perhaps, the most obscure and difficult to distinguish. Hydatid tumour, which usually has its origin from the edge of the liver, or from the diaphragm, in consequence of its indistinct fluctuation, and its semi-elastic character communicated to the touch, is less likely to create doubts as to the true nature of the disease. Hydatid tumours also frequently point early, which evidences their character.

Case No. 7.

Carcinomatous tumour in the Stomach, attached to the cardiac extremity, and larger curvature. — Extensive deposit of tubera in the liver.

Mr. C., aged 60, Foreman in a large Colour Manufactory.

He had complained for a long time of dyspeptic symptoms, of heartburn and pyrosis, and had felt more lately great disgust for all kinds of food. He was quite unable to go through his usual work, and experienced a painful sense of weakness, being fatigued by small exertion. He had lost flesh considerably: his pain was great after eating; but his sufferings appeared less acute than in similar cases. His own impression was, that his complaints arose from inhaling deleterious gases, which are necessarily evolved in the process of making colours. He had not vomited latterly, but had disagreeable fetid fluid constantly rising into his mouth: his tongue was clean, his bowels confined. He had the peculiar complexion of cancerous disease very strongly marked, which had been the case for a

year previously. His health had been declining for about two years. On examining him carefully, a tumour of large size was plainly palpable at the pit of the stomach, though it was not defined in form. The examination gave him great pain, followed by prolonged uneasiness. When the tumour was pressed upon he was constrained to spit out fluid, which, to use his own words, "rose from the stomach," when the pressure was made. The liver could be felt distinctly extending far beyond the margins of the ribs, and its surface, which could be distinguished through the parietes, was resisting and uneven: the abdomen altogether was very full. The symptoms gradually increased upon him, and he died about a fortnight afterwards.

*Examination of the Body forty hours after death, by
Mr. Sleight, with whom I attended the case.*

On opening the abdomen the stomach presented itself very prominently. On cutting open the stomach an exceedingly fetid tumour was found occupying the cavity, larger than the doubled fist, projecting into the body of the stomach, and having its attachment to the cardiac extremity and larger

curvature. There was no thickening of the coats of the stomach except at the point of attachment of the tumour, nor any deposit of carcinomatous matter in them, except at that part. Nutriment must have been freely received into the stomach, and, as far as the pylorus was concerned, might have passed out again as freely, since there was no disease at either outlet. The whole surface of the tumour was in a state of ulceration and most offensive decomposition: the tumour was of a consistence somewhat firmer than brain, and had a somewhat spherical form, with small attachments to the mucous coat. The liver was nearly twice its natural size, from containing extensive deposit of encephaloid matter in the form of tubera, varying from the size of a pea, or less, to that of a large orange. These tubera projected considerably, having vascular marblings or radiations over their surface. The tubera were elevated above the surface of the liver, and here and there corresponding tubera were to be seen developed beneath the serous covering of the diaphragm. See Plate No. 5., which shows a portion of the acute margin.

REMARKS.

In this case vomiting did not occur as a symptom towards the later stages of the disease: the patient was troubled with nauseous and disgusting "risings" of fluid, which, by the partial and imperfect contractions of the coats of the stomach, were from time to time squeezed up the œsophagus.

The stomach had not lost its power to contract, but it was completely prevented from acting effectually by the intervention of the large foreign body which it contained; the secretion from the surface of which must alone have been sufficient to produce the nausea and disgust of which the patient complained.

This imperfect contraction of the coats of the stomach is not to be confounded with that defective action of the muscular coat which arises from infiltration and degeneration of its proper structure, as found in carcinoma of the larger curvature.

Case No. 8.

Carcinomatous tumour in the Stomach attached to the larger curvature and to the cardiac extremity ; encephaloid deposit in the liver ; adhesions of the stomach and liver with ulceration of the stomach ; a fungoid tumour removed from the groin four months previous to death.

William Clark, aged 62, residing at Sculcoates.

A poor-looking, emaciated, but steady and temperate man, in good employment in an oil-mill. I saw him in consultation with Mr. Hardey, about four months before his death, at which time a small fungoid tumour (some portions of which were decidedly medullary, while other portions deserved the designation hæmatoid), had been removed by Mr. Hardey from the right groin. The tumour had its origin from the cicatrix of a *second* operation for strangulated femoral hernia, which had been performed three years previously, he having suffered a still earlier operation about two years before that ; being five years before his death.

At the period of the operation at which I was present he made no complaint of stomach symptoms beyond being much troubled with flatulence. From the nature of the tumour we felt convinced that at no distant period the other viscera would become affected, and there was only just sufficient stomach derangement to lead attention to that organ.

He became subsequently the subject of severe dyspeptic symptoms, accompanied by great pain in the region of the stomach; three months after the last operation he was much troubled by flatulence, and more lately by eructations of fetid gas, which was constantly escaping from his stomach. On careful examination of him, a tumour could be distinctly felt at the pit of the stomach, which had been until now the seat of all his pain. His liver could be felt extending considerably below the margins of the ribs.

I saw him again at the end of four months from the removal of the tumour; the symptoms which were then most urgent, were those of pleurisy; viz. an acute pain in his left side, accompanied by a short cough, a quick pulse, a white tongue, and high-coloured urine. His breathing

was difficult, and he could not lie upon his right side; these latter symptoms had supervened suddenly, and were most probably the result of inflammation of the veins; he was in no state to be reduced by treatment. His symptoms gradually increased upon him, and he died in a few days.

An examination of the body was made thirty hours after death.

The body was thin, but not very emaciated. On opening the chest, the ribs were found ossified. Three pints of turbid fluid were in the left cavity of the pleura, and shreds of lymph were floating amongst it: much lymph and pus were attached to the back and root of the lung, from the apex to the diaphragm.

Abdomen.—On opening the stomach, a large soft tumour, of the size of an orange, was seen attached by a very small base to the larger curvature near to the cardiac extremity; its structure was easily broken down, and it consisted of loose cellular tissue containing medullary matter; its surface was of a dark muddy brown colour, and in a state of decomposition. The coats of the stomach were not thickened except at the precise point of attach-

ment. The liver was pale, and tinged with a light bluish colour, and the serous membrane was opaque from chronic action. The left lobe of the liver was adherent to the cardiac extremity of the stomach; at the point of adhesion, ulceration to the extent of a shilling had completely extended through the coats of the stomach: the orifices of the stomach were quite free from disease.

The liver, on being cut into, was found studded with encephaloid deposit in small patches. The spleen and left kidney were adherent, the kidney being changed by a deposit of yellowish matter, giving to the organ a mottled appearance, but not altering its form. The right kidney was healthy. The omentum was adherent to the ring, from which four months previous the fungoid tumour had been removed; two small gland-like tumours were also found adherent at this point to the omentum and to the cicatrix. The bladder was greatly hypertrophied: it was not contracted, and its coats were half an inch in thickness.

REMARKS.

It is probable that the two foregoing cases of carcinomatous tumours in the stomach would have been placed by Müller in a different class. He is of opinion that the absence of thickening of the coats by the deposit of carcinomatous matter in the cellular tissue, if not conclusive against the carcinomatous nature of the tumour, is, at least, sufficient to render it questionable; but the presence of encephaloid tubera in the liver in both the cases, the existence in the second case of fungoid tumour at the groin, and the malignant ulceration through the coats of the stomach where adherent to the liver, coupled with the presence of the general characteristic symptoms which attend cancerous disease, are sufficient to influence me to regard them as carcinomatous. The state of ulceration and decomposition of the tumours followed as a consequence of their being so slightly attached to the coats of the stomach as to be almost independent, and beyond the reach of the preservative influence of the system.

In Case No. 8. the suffering was wholly referred

at the last to the pleuritic symptoms ; thus a sort of counter-irritation in the chest subdued for the time the distressing symptoms in the stomach. A similar effect must have been produced during the existence of the ulcerated tumour at the groin, when the stomach symptoms were so masked as scarcely to attract the patient's notice ; it is probable, however, that the removal of the tumour hastened forward the stomach disease, when the usual dyspeptic symptoms followed rapidly and severely. The amount of suffering altogether was not so great as in many others, which may probably have arisen from the smallness of the attachment of the tumour to the larger curvature.

Case No. 9.

Areolar carcinoma of the larger curvature of the Stomach, extensive swelling and infiltration of the coats with ulceration and melanotic tinge. No vomiting in the later stages of the disease. Encephaloid deposit in the liver.

Mr. B——, aged 62. A general Practitioner of the Old School.

He had laboured hard, and gained a competency by attending upon the poorest class. I saw him in consultation with Mr. Lee. He told me that he had been declining in health and strength for some time. For nearly two years he had suffered from severe dyspeptic symptoms, and especially from vomiting about a couple of hours after taking food. The vomiting was preceded by much pain. Lately he had not been inconvenienced by vomiting, but instead of it he had frequent rising of acid and very disagreeable fluid into his mouth, accompanied occasionally by fetid gas; he had pain at the pit

of the stomach. His bowels were very confined, his pulse quick, and small, his tongue was nearly clean, rather inclined to red.

On examining him a distinct enlargement at the pit of the stomach could be felt through the parietes, but it was not defined. Great pain was experienced on pressure being made exactly at the pit of the stomach, and during the examination by the hand. The liver could be distinctly traced, extending much below the margins of the ribs, and forming one mass with the tumour at the pit of the stomach. Great resistance was offered by the liver to pressure on its surface, which felt hard but smooth. No pain was experienced by this examination of the liver, nor from pressure on the abdomen below the situation of the stomach, but only over the seat of the stomach itself.

His complexion was dingy, sallow, and opaque, but not of the hue that arises from the absorption of bile into the blood: the conjunctiva of the eye was peculiarly pearly, and his urine was not tinged with bile. He never complained of much pain, except on moving in bed, or during the time and some little while after examination. He was quite

collected in intellect until a day or two before his death.

The symptoms varied but little until he sank.

Inspection of the Body twenty-nine hours after death.

On examining the chest —

The heart and lungs were found quite natural, except for the presence of a patch of white near the apex of the heart. Some fluid was found in the cavity of the pleura. On opening the abdomen, the liver was found adherent to the parietes and to the stomach. The stomach was torn in the attempt to separate the adhesions, and at this point was contracted. The chief of the disorganization was in the larger curvature, rather nearer to the pylorus than to the cardiac extremity: the pylorus itself was quite free, and not involved in the disease: its mucous lining was quite natural. All the coats of the stomach were involved in the disease, the surface was extensively ulcerated, uneven, and of irregular forms, the thickness of the walls in some parts exceeding an inch. The infiltration was so extensive that the stomach did

not collapse. The ulcerated surface in this case had a yellowish brown colour, with a general bluish tint pervading the whole interior of the stomach, with here and there a melanotic spot staining the mucous surface. The rugæ of the mucous coat were much hypertrophied, the more so as the diseased part was approached.

Near to the pyloric extremity, and close to the spine, were several tumours of encephaloid matter in fibrous tissue, of firm structure and of a blue colour.

The spleen, kidneys and intestines were in a healthy state. There was great accumulation in the colon. He had been in the habit of emptying the rectum by a lavement, but scarcely ever ventured on aperient medicines.

The liver was studded throughout with encephaloid deposit, in patches not elevated above the surface: the external surface of the liver was of a deep purple colour: the interior, pale yellow, and much harder than natural. See Plate 6.

REMARKS.

This is a very well-defined example of the areolar, or alveolar, or colloid form of carcinoma. The great swelling of the coats, the infiltration of jelly-like matter in the alveoli of the morbid deposit, the extent of the disease, and its various adhesions, with the complete degeneration of the proper structure, combine nearly all the characteristic marks of this form of carcinoma. The absence of vomiting in the later stages of the disease, and the obtuseness of the pain when quiet and uninterrupted by pressure, might, but for the existence of tumour, have been likely to mislead in forming a diagnosis.

In corroboration of former general remarks made on the symptom of vomiting and its absence, we may here observe that a stomach, the coats of which were thus hypertrophied and infiltrated with carcinomatous deposit must be rendered incapable of contracting sufficiently to perform the act of vomiting: hence, from the imperfect contractions of the muscular coat, followed those sour and disagreeable risings of which the patient com-

plained. The adhesions between the liver and the stomach would also very materially interfere with the muscular contractions of the stomach, and so impede the act of vomiting. These adhesions, however, may in one sense be considered preservative, since they prevent the escape of the secretions of the stomach into the cavity of the abdomen, which would otherwise be the consequence of the extension of ulceration through the coats.

Case No. 10.

Cancerous ulcer.—Areolar carcinoma of the stomach. — Vomiting. — Emaciation. — Undefined tumour at the pit of the stomach.

J. Thompson, aged 58, an In-patient in the Hull General Infirmary.

He was admitted into the Hospital in a wasted condition, having the peculiar complexion of cancerous disease. He complained of being much distressed by vomiting his food, which he did at different intervals after having eaten, varying from an hour or two to several hours after. He had deep-seated pain at the pit of the stomach. On examination of his

abdomen, a fulness could be felt at the pit of the stomach, pressure on which by the hand caused great pain; but no defined tumour could be made out: great pain was complained of just before vomiting, and especially after pressure. He sought relief always in the recumbent posture, and upon his back. Hiccup was a distressing symptom: he had long suffered from dyspeptic symptoms: his tongue, which throughout had been clean, became aphthous: he remained for a few days scarcely conscious, and died, gradually exhausted.

Examination of the Body twenty hours after death.

The body was emaciated.

On opening the abdomen, the stomach was found to be the seat of what has been termed cancerous ulcer. The ulcer was situated in the larger curvature, but near to the pylorus. The carcinomatous deposit in this case assumed a particular and almost defined form; the deposit, though here and there in detached masses (the elevated parts of which were in a state of ulceration), had a somewhat circular form, with elevated portions, having radicles extending outward until lost in the rugæ

of the stomach: the space contained within the elevated boundary was in a state of sloughy ulceration, and of a deep green colour. See Plate, No. 7.

The cardiac and pyloric orifices were both quite free from disease. A section of the diseased part, as seen in the drawing, showed much thickening of the coats at that part, by deposit of carcinomatous matter in the cellular tissue connecting the mucous and muscular coats: the peculiar partitioned appearance of areolar carcinoma was well exemplified, the septa taking various directions.

The liver was the seat of encephaloid deposit in small patches not elevated above the surface.

REMARKS.

This case presented many difficulties in the diagnosis. The variable period after eating at which vomiting took place, and the absence of defined tumour, were negative evidence against pyloric disease. The excess of pain at the pit of the stomach, especially before vomiting and after examination by the hand, was negative against disease of the pancreas. Had the fulness

been due to deposit of carcinomatous matter external to the stomach, the vomiting would not have depended upon the taking of food at all, which it apparently did, although the intervals were variable. The periods, therefore, at which the vomiting returned after eating, preceded by pain, pointed to the interior of the stomach for the seat of the undefined fulness; and this could be better distinguished as he became more emaciated.

As the disease advanced, as might be expected, the vomiting became less perfectly performed, owing to the infiltration of carcinomatous matter in the coats, and the subsequent disorganization of the proper structure of the organ.

CHAPTER VI.

CARCINOMA OF THE PYLORUS.

WE now approach the pyloric extremity of the stomach, which is by far the most frequent seat of carcinomatous disease. The areolar form is that most commonly met with at the pylorus, though simple carcinoma or scirrhus stricture does sometimes occur. We have less difficulty in forming our diagnosis in this situation of carcinoma than where other parts of the stomach are attacked.

A distinct, well-defined, resisting tumour may always be detected by the practised hand, some months before a fatal issue. As the disease advances, in some cases the tumour loses somewhat of its defined character. Adhesions take place to surrounding parts, and the precise position of the original seat is less palpably distinguishable; but, notwithstanding, it rarely happens that the form and position do not remain obvious to careful examination.

Pyloric disease at its onset is usually marked by symptoms of dyspepsia. They are urgent and distressing, and do not yield to the remedies which are found to avail in functional disorders of the stomach. These will have been present for about two years before the disease approaches to a crisis. In the latter year the change to the true cancerous complexion marks the uncontrolled advance of structural disease. With a few exceptions, pain, which is aggravated by touch or pressure, is experienced in the region of the stomach, to the right of the ensiform cartilage. During the examination, when the diseased part is touched, it is usual for the patient, though suffering severely from the ordeal, to express a peculiar and melancholy satisfaction that you have touched the precise point from which all his pain proceeds.

Sickness is also generally a marked symptom of this situation of the disease; it comes on two or three hours after taking food, and is almost always preceded by pain.

These two characteristic symptoms, pain and vomiting, are sometimes, though rarely, wanting. It is difficult to account for the absence of the

pain. I can myself find no other probable explanation than the following: viz., that cancerous deposit, without ulceration, has been made in the course of nervous communication between the ulcerated part and the brain: the opposite explanation of this is apparent when cancer has its seat amongst nervous matter and is ulcerated: here intense pain is the result.

The absence of vomiting, which is rare in this seat of the disease, admits of the same explanation as I have offered when the curvatures are the seat of carcinoma. The more extensive the disease becomes, the more likely is the act of vomiting to be superseded by mere regurgitation.

Sickness is sometimes suspended for a period in pyloric disease. I have known an interval of fourteen days between the vomiting, when all at once the accumulation of nearly all that had been taken during the interval was vomited in a chymified state, mixed with mucus, or with vitiated secretion from the ulcerated surfaces. The greatest relief is experienced after this complete emptying of the stomach; and when it occurs for the first time, the patient has a delusive conviction that the complaint

is finally subdued. The accumulation, however, soon again takes place; and it is painful to witness the corresponding depression which succeeds this temporary but disappointed hope. It is usual at this time for the spirits to begin to droop, and the patient is unable, upon the faintest excitement, to restrain emotion, even to tears.

The pulse is usually natural, and the tongue up to a late period almost always clean. The bowels are generally in a confined state. The clean tongue with an ulcerated cancer in the stomach is an apparent anomaly, and one difficult to explain or account for.

Ulcerated carcinoma of the pylorus is, as far as my observation goes, always accompanied by encephaloid deposit in the liver. The liver increases in size in consequence of the deposit which takes place in the form of patches or of tubera, varying from the size of a pin's head to that of the doubled fist; the proper structure of the liver between the tubera appears in most cases natural.

In the later stages of the complaint, tubera, if projecting above the surface of the liver, can be detected by careful examination through the pa-

rietes. Pain is not a symptom which guides us in this examination : when the tubera do not project, the liver can often be examined without pain being experienced. Jaundice sometimes accompanies this situation of carcinoma. It arises as a consequence of the extension of irritation along the duodenum to the outlets of the gall-ducts.

The conjunctiva, which is usually in carcinomatous disease of a pearly whiteness, is the first to mark the presence of bile in the blood, and itching of the skin is often a troublesome attendant : the urine at the same time is charged with bile.

The gall-bladder is almost always found to contain gall-stones ; and I have remarked, that patients who have been the subject of cancer of the pylorus, have previously suffered from attacks of gall-stone. The gall-stone generally consists almost wholly of cholesterine.

The secretion from the kidneys is often clear, and copious, and natural, until the later stages.

SIMPLE CARCINOMA OF THE PYLORUS.

Simple carcinoma or scirrhus stricture does occur at the pylorus, but not frequently.

It is attended by pain and vomiting two or three hours after eating. A distinct circumscribed tumour of small size can be distinguished on careful examination through the parietes. The stomach in the interval of vomiting may be greatly distended and embarrass the examination. The liver is affected by encephaloid deposit. The general symptoms of cancerous disease are always well marked; but pain is not always among the prominent symptoms.

I give the following case as an example of this situation of simple carcinoma.

Case No. 11.

Scirrhus stricture at the Pylorus. — Small amount of pain, and scarcely any vomiting.

Mr. H——, aged 78.

I saw him in consultation with Mr. Sleight.

He complained of but little pain; not more, he said, than was relieved by ten drops of laudanum,

three or four times a day. At the time I attended him, a few weeks before his death, he did not vomit much; but he had scarcely any appetite, and took very little food. For the last two years he had suffered from indigestion, which was much increased in the last year. His countenance bore strongly the marks of cancerous disease. He had no fetid air escaping from the stomach, but always felt more comfortable when the stomach was empty. His bowels were always confined. He was extremely emaciated. A small, hard, resisting, tumour, the form and size of a bantam's egg, was to be felt to the right of the ensiform cartilage. He became unconscious some time before his death, and gradually sank.

Examination of the Body thirty hours after death.

The body was emaciated.

On opening the abdomen the stomach was found at its pyloric extremity to be the seat of simple carcinoma or scirrhus stricture. The surface looking towards the stomach was merely abraded; it could hardly be said that ulceration was fairly set up. The abrasion was quite superficial. A probe

could be passed through the pyloric orifice into the duodenum.

The colon was loaded with feculent matter as far as the sigmoid flexure.

The liver was small and contracted, and darker in colour than natural: only a single patch of encephaloid matter was discovered on the convex surface near to the gall-bladder. The margin of the liver was still acute.

The late period of life at which the disease was developed might have some influence in modifying the symptoms; the very small amount of pain was remarkable, and difficult to account for, except from his great age.

Case No. 12.

Areolar carcinoma of the pylorus and pyloric extremity of the Stomach, attended by vomiting.—Encephaloid deposit in the liver.—Gall-stones in the gall-bladder.—Habitual constipation.

Miss S——, aged 69.

Had been as many as fourteen or fifteen years subject to disordered digestion, during the last

eight years of which time I had attended her at intervals. Her bowels were obstinately costive: she suffered much from flatulence. Until the last two years she had always been relieved by aperients and alkalis. She was of most temperate habits, her complexion was always sallow and dingy: she had, some years before I attended her, several attacks of gall-stones. The last year of her life her complexion began to be more opaque, and her eyes to be more sunken. She then began to vomit her food two or three hours after taking it, and complained of pain before and after vomiting, and of burning heat in the region of the stomach, with occasional intensely acute pain, which shot from the pit of the stomach to the back, between the shoulders. She was in the habit of seeking relief by lying on her stomach: hot applications external to the stomach gave her temporary relief. A tumour could be felt at the pit of the stomach, and great pain was excited by pressure over it. She was in the habit formerly of passing what she used to term "casts" of the bowels, apparently secretion or exudation of a tubular form, somewhat similar to the concretions of lymph formed in the trachea in cases of croup.

During the last month of her life, she was greatly inconvenienced by eructations of fetid gas from the stomach; and she frequently vomited large quantities, sometimes as much as half a wash-hand-basinful at a time, of dark coffee-coloured fluid, mixed with mucus, from which she obtained temporary relief. A dreadful burning heat, with great nausea and pain, always preceded the vomiting.

Her tongue had been tolerably clean throughout; but it became latterly reddish and sore.

Worn out by her complaint, she died emaciated; but was perfectly collected almost to the last.

Examination of the Body, thirty hours after death, was made by Mr. Wallis.

The body was emaciated. Before opening the abdomen the tumour could be distinctly felt through the parietes.

On opening the abdomen, the stomach was found distended by about a pint of blackish fluid: the cardiac extremity presented only a slight blush of redness. The change of structure was confined to the pyloric extremity, and to the pylorus itself.

The pyloric opening was narrowed by the presence of carcinomatous deposits in the coats; but the finger could easily be passed from the stomach into the duodenum. The deposit of carcinomatous matter took a winding direction through the pylorus, giving the appearance of a thin piece of rope coiled up in a spiral form under the mucous membrane, and making a couple of turns: the elevated surface of this ridge was ulcerated at many points, being of a reddish-brown colour. The disease was nearly confined to about two and a half inches from the pylorus, in the pyloric extremity of the stomach, having radicles extending into the larger curvature. On the duodenal side the disease appeared to be bounded abruptly by the outer edge of the pylorus itself. (See Plate, No. 8.)

The liver was soft, and easily broken down; it was studded all over with encephaloid tubera, from the size of a pin's head to that of a hazel nut: one single tuber was as large as a walnut; some of them projected slightly above the surface of the liver.

The gall bladder enveloped a large gall-stone, which entirely filled it: the stone was two inches

long, and an inch in its transverse diameter, at the fundus of the gall bladder. (See Plate, No. 8.)

Case No. 13.

Ulcerated areolar carcinoma of the pyloric extremity of the Stomach, with deposit of encephaloid matter external to the pylorus and duodenum, and adhesions. — Extensive encephaloid deposit in the liver.

Mr. B——, aged 65.

I saw him in consultation with Mr. Sleight: he had been seriously ill for three months, but he had been “falling off,” or declining in health, for some time — certainly more than twelve months.

He referred to the region of the stomach as the seat of his pain: he complained of constant nausea, and of vomiting his food generally a few hours after taking it; at other times he vomited a fluid like fullers'-earth and water. His bowels were much confined, his motions dark green; his tongue was clean, and his pulse natural. He had shrunk much in person; his colour was sallow, but dingy and opaque; his countenance pinched, but the expres-

sion mild, and he appeared exceedingly anxious about himself, and deeply impressed with the belief that there was something irremediable in his case.

On examining his abdomen, a distinct, hard, well-defined, but not large tumour, could be felt in the situation of the pyloric extremity of the stomach: a great enlargement of the liver could be also palpably detected; it projected below the margins of the ribs, and its surface felt uneven to the hand, making plain the existence of tubera. Immediately on pressure being made upon the pyloric tumour, he experienced great pain. He at once acknowledged this as the place from which all his pain and sickness arose; the same pain being occasioned by pressure over the part which he had always felt previously to vomiting. In the later period he vomited large quantities of fluid, like porter, with dark, dirty-looking froth floating on it, of disagreeable smell and taste, as if putrid. This fluid, after being vomited, and at rest, deposited a muddy sediment, like that made after rain in a macadamised road: it was sometimes more flocculent and light, with dark shreds floating in it. At times he

rallied for a day or two, when his spirits revived, and he thought he only wanted strength: he relapsed into despondency again on the recurrence of pain and vomiting. At this time he was much distressed by the foetid gas which constantly rose from his stomach, and by a nauseous acid taste in his mouth; he suffered much from hiccup, and from heats and chills, as also from great exhaustion, and a painful sense of sinking; he felt a burning heat in the stomach, and though the weather was cold, could not bear a fire in his room.

These symptoms continued with little variation for some time; his bowels continued obstinately confined, but he sometimes felt a rushing of air through them, with a sensation of *lightness*, as if "all might yet be right with him."

As the disease advanced his hiccup was more continued and distressing; sometimes it lasted for half-an-hour at a time, and it frequently returned. His tongue soon became aphthous; he refused food; a little beef-tea, without any salt, being all that he could retain, even for a short time, on his stomach: opiates afforded him temporary comfort. The fluid which he vomited in the last stage was

of a yellowish-brown colour, and always offensive: the day before his death he vomited foetid bloody fluid, with coagula, and pieces of fibrine.

Examination of the Body twenty-two hours after death.

The body had a worn rather than an emaciated appearance; there still remained some little adipose matter in the parietes.

On opening the abdomen, the stomach was found to contain more than a pint of highly-offensive, putrid, bloody fluid: at the pyloric extremity of the stomach was a fungous ulcer, between two and three inches in diameter, having a very uneven surface, and of a dark purple colour, covered with dark purple spots, and with small clots of blood, which had apparently oozed from the ulcerated surface. The coats of the duodenum were much thickened, but not strictured; the finger could be passed from the stomach into the duodenum: externally, the pylorus and duodenum were attached and adherent to the surrounding parts, and encephaloid matter was freely deposited in their immediate neighbourhood. The liver was much enlarged by

the deposit of encephaloid tubera, with which it was extensively studded, some of the tubera being two inches across, having apparently healthy liver between them.

The "acute margin" of the liver had entirely lost its title to that designation, its upper and under surface being thrust out or distended by the deposit of tubera; the gall bladder was thickened and opaque, with a large gall-stone impacted in the cystic canal and upper extremity of the gall bladder. The other viscera were free from all deposit of encephaloid matter, and apparently natural.

Case No. 14.

Areolar carcinoma of the pylorus, with some narrowing of the opening into the duodenum. — Slight deposit of encephaloid matter in the substance of the liver.

Mr. I. K——, aged 48.

Foreman of large steam-boiler works: an intelligent, steady man. I attended him with Mr. Bell during the last week of his life; he was much

thinned ; his temples were hollowed out, his skin dry. He vomited frequently and largely ; he had great thirst, and having quenched it the fluid again immediately returned, as if from a forcing-pump : sometimes he vomited during the day as much as a wash-hand-basinful of greenish fluid, having a dark sediment.

On examining him as he lay in bed, an uneven resisting tumour could be distinctly felt at the pit of the stomach ; slight pressure of the hand caused considerable uneasiness. Immediately the tumour was first pressed, he exclaimed, " Aye, that's it—the very spot ; you have touched it directly."

As long as two years previously he had suffered from what he called " indigestion," with " heart-burn," and had been in the habit of taking " anti-bilious " pills for its relief ; he had habitually suffered during that time great pain in his stomach and bowels, and frequently vomited clear water, having no particular taste, but rather bitter ; he had always a bitter taste in his mouth : he always got some relief from vomiting, but the amount of relief obtained, and the length of time it continued, gradually decreased. His bowels were

usually confined, and his evacuations dark green, and offensive. When I first saw him he had only kept his bed a fortnight, having continued, though with great discomfort up to that time, to superintend "the works." He felt easier in bed, and on his back, than in any other position; though a month before he had not been able to lie upon his back at all, from the pain which that position brought on in his stomach. He complained of great pain between his shoulders, extending from the stomach up to the chest and throat, and a "rising up" from his stomach, as if his inside were raw. Flatulence escaping from the stomach always gave him relief: he had some hiccup; he felt himself gradually sinking: he died exhausted in a few days.

Examination of the Body forty-eight hours after death.

The body was much emaciated, and the abdomen quite collapsed.

The pylorus was contracted; its coats much thickened, to the extent of a quarter of an inch, and of cartilaginous hardness; the passage from the stomach to the duodenum admitted the little

finger; the thickening of the coats was bounded by the pylorus towards the duodenum, but extended two inches into the stomach; the whole surface was denuded of its mucous membrane, and in a state of ulceration, with elevated bright red patches at intervals along the ulcerated surface.

The liver was glued by old, but small, adhesions to the parietes: no encephaloid deposit was visible on the external surface of the liver; but, on being cut into, small white patches were here and there to be seen.

The foregoing cases present a remarkable similarity in their general features.

The case (Miss S——) which I had the opportunity of watching very closely for a long period, is more minutely detailed as a sort of model case. The other cases, and all which I have seen, differ very little from it in their general symptoms. This uniformity peculiar to disease in the orifices may be attributed to this, that it but rarely extends itself by external adhesions to other organs; and thus, not being involved with other organs and tissues, is liable to fewer modifications, and con-

sequently to a less varied train of symptoms, than the disease when situated in the larger curvature. The tumour, therefore, at the pylorus is, with few exceptions, small, resisting, and defined.

Case No. 13. (Mr. B——) is in some degree an exception to the above general observation, that the disease does not extend itself beyond its original seat; and yet in that case the tumour had the characteristics just stated, and there was no difficulty in the diagnosis. I have also met with other exceptions, though not enough to interfere with the above general description of the course of the disease at this outlet. It may be also stated as a prevailing rule, that the stomach does not lose its power to contract completely, and empty itself of its contents; indeed, the deposit of the material of carcinoma at the pylorus rather assists than retards the rejection. The characteristics already described, together with the comparatively greater pain, and all the usual signs marking carcinomatous disease, are sufficient to leave but little difficulty in forming a certain diagnosis.

CHAPTER VII.

CARCINOMA OF THE STOMACH, EXTERNAL TO IT, AND
INVOLVING OTHER ORGANS.

THE consideration of this form of disease is more deeply interesting than that of the preceding, inasmuch as there is more to be yet learnt of the pathology, and more advantages to be hoped from a well-defined plan of treatment. Till within a comparatively late period this disease was considered so obscure, that the diagnosis hardly exceeded a distant guess at its seat and peculiar character; and even in later times very excellent physicians have often found difficulty in hazarding a conclusion. Although, unhappily, like the foregoing, it has a too certainly destructive tendency, yet it is within the reach of art in some degree to control the symptoms, if not to retard the progress, of disorganisation: at the least, it is the privilege belonging to a right apprehension of the disease to protect

the patient from harassing and useless remedies ; and it is certain that the course of treatment seemingly called for by the patient's symptoms is not only unsuited to the complaint, but likely to hurry it more rapidly to a fatal termination. I wish most earnestly that my contribution to the clear history of this disease were more commensurate with the obscurity which envelopes, or the interest which appertains to it. Perhaps it has been felt by other physicians, that, in examining a patient, a conviction respecting the nature of the case springs up in one's own mind which can hardly be imparted to another, as it is not based on any deliberative process of reasoning. In this instance the conviction possibly arises more from knowing what the disease cannot be than from any tangible evidence of what it is.

PATHOLOGY.

Deposit of carcinomatous matter may take place beneath, or on the free surface, of the serous membrane covering the stomach, and the neighbouring

viscera (as the duodenum, the head of the pancreas, the omenta, the mesocolon, &c.): the deposit varies in consistence from the hardness of scirrhus to the softness of pulp. It is difficult, if not impossible, to assign a position to the earlier deposit: as it increases, however, lymph is effused, and adhesions are formed, by which contiguous parts are glued together; the viscera become bound to the spine, and to each other, by these adhesions, and, as a consequence, the healthy performance of their various functions is interfered with. The adhesions often present a dark smoky hue, and jelly-like appearance, and are easily torn through: the proximity of organs, rather than the similarity of function, seems to be the cause of their being involved. The order in which the parts are severally included in the diseased mass may be inferred from the succession of the symptoms which will be hereafter detailed: this order, as well as the number of organs finally included, varies in different cases. In some cases the disease proceeds until portions of the stomach, the duodenum, the pancreas, the colon, and even the liver, are all involved in one diseased mass, forming an undefined

tumour. In the later stages of the disease ulceration finds its way into the duodenum, the stomach, or the colon. The ulceration has a peculiar character, differing from that which results when the primary seat of the deposit is in the submucous cellular tissue: the disorganising process is, perhaps, more properly expressed by erosion, which takes place through the coats, where either hard or soft material of carcinoma is deposited.

When the extension of the disease is to the duodenum, and perforation of the coats takes place, the orifice of the gall-ducts becomes involved, and jaundice supervenes; the calibre of the intestine becomes narrowed, and the stomach in consequence obtains a habit of unusual distension.

The pancreas is ascertained generally by post-mortem examination to be included in the disease; and from its proximity it is to be inferred that it is simultaneously affected with the duodenum: there is no train of symptoms, however, with which I am acquainted to give certain notice of this organ being involved.

When the extension of the disease is towards the stomach, similar erosion of the coats takes place as in the duodenum, and is followed by the same set

of symptoms as have been enumerated as denoting ulceration of the mucous coat.

When the extension is to the colon, the centre of the arch, from proximity, is the part attacked; the bowel at that point becomes narrowed, and there is a mechanical obstruction to the passage of the antecedent contents; the contractile power of the muscular coat is at the same time interfered with by the adhesions: the capacity of the whole tube to this point enlarges, and the bowel remains habitually distended, just as the stomach does by pyloric or duodenal interference. This state of the colon gives rise to the accumulation which will be noticed as a prominent symptom: diarrhœa or dysentery follow from the effects of ulceration through the mucous lining of the colon.

The liver is secondarily affected by the deposit of encephaloid tubera, and in some cases subsequently becomes adherent to the diseased mass; the gall bladder is usually distended with bile, and contains gall-stones. Secondary deposit also sometimes takes place in the lungs, though very rarely, but it does not proceed to a state to cause any very prominent pulmonic symptoms.

SYMPTOMS.

Amongst the earlier symptoms of this disease, unsatisfactory relief from the bowels is the most prominent. It is experienced for a year or more before the more urgent symptoms set in, and is accompanied at intervals by nausea, retchings, and headache. Pain is also suffered, but not to any great extent, and it is referred by the patient to an unremoved accumulation in the bowels; it is described as situated at the pit of the stomach, or rather lower. The patient subsequently begins to lose flesh, the features shrink, the complexion becomes opaque, sallow, and exsanguineous; the eye looks sunken, and the strength begins to fail: great anxiety about his health now possesses the patient, who is often prone to seek various opinions, until he finds a voice ready to flatter him with the delusive promise of a cure.

At this early period the tongue is tolerably clean, but not in the peculiar degree met with in carcinoma of the interior of the stomach; the pulse is, on the whole, natural, but inclined to be weak and frequent; there is often morbid appetite, and

considerable thirst; sometimes a degree of voracity for food, whether solid or liquid.

The accumulation in the colon really exists, and is with difficulty dislodged. Pyrosis often supervenes, with the peculiar drawing-in of the diaphragm to the spine.

Within three or four months of a fatal termination a careful examination of the abdomen usually reveals an unusual fulness a little to the right of the pit of the stomach; it is hardly felt as a tumour, but as an undefined resisting mass, and it appears to rest upon the spine: pressure by the hand causes pain; and, the same as in cases of ulcerated carcinoma of the stomach, I have several times noticed that the patient exclaims with satisfaction that the precise seat of the pain has been touched, and he generally adds his conviction that the cause will be removed.

At this time loss of flesh and strength increases, the appetite fails entirely, there are vomitings and retchings: the nights are restless, attended with pain. Hiccup is a very distressing symptom, and increases both in violence and in duration of the fit as the disease advances. The tongue shows a

tendency to aphthæ, which also gradually increase. Local irritation on the skin, as erythema and erysipelas in the lower extremities, sometimes appear; and whilst they are present there appears some little remission of the other symptoms. Diarrhœa of severe character sets in at intervals: jaundice, with all the symptoms attendant upon it, often supervenes about this stage of the disease.

In the absence of jaundice the urine is often copious and natural. In some cases there is great dyspnœa.

Among the latest symptoms may be enumerated, disgust for food of all sorts; an extraordinary sense of sinking: the action of the bowels is followed by an extreme state of exhaustion, accompanied by profuse perspiration. The patient continues to lose flesh, and the change of complexion proceeds to perfect exsanguineousness. Evening fever now comes on; the pulse is quick, ranging much above 100; vomiting takes place, of dark, coffee-coloured fluid, or even of blood, or hæmorrhage takes place from the bowels. A shivering fit and delirium also occur in the later stages. Even till the latest period of the

disease there are occasionally short intervals of rallying; but these periods of hope are soon superseded by the more urgent symptoms, and the depression and exhaustion are then extreme.

Case No. 15.

Mr. L——, of ——, Lincolnshire, aged 60.

He first consulted me in August, 1841. He then complained of imperfect action of the bowels, and that all aperients which he had used had ceased to be effectual, the relief produced was never full or satisfactory, although he had recourse to very active doses; there was no fulness of the abdomen; he complained of but little pain, and the small amount which he experienced was in the region of the back and loins, and this he attributed to an unrelieved state of the bowels. His appetite was, on the whole, good, though he had occasional distaste for food. He was of temperate habits, though he daily took both ale and wine, in rather full quantities. He complained that his nights were not refreshing, as they had been: he had been in the habit of being much on horseback, but had latterly

preferred his carriage, giving as his reason that he was suffering from hæmorrhoids, but it was plain that there was some consciousness of decline in his usual power which led him to avoid the exertion of riding. At this time, hoping that serious disease might not develope itself, active aperients were prescribed, which gave great temporary relief: it was followed by a course of gentle warm aperients, which were all highly satisfactory at first, and were exchanged for others as they ceased to be effective.

I saw him again early in November. The bowels were still in an unsatisfactory condition; but he then complained also of his head, and felt greatly alarmed that he should be attacked by apoplexy. On carefully examining him, I found great enlargement on the right side of the abdomen from fulness of the colon; and though I represented to him that his sense of fulness in the head might be attributed to the state of his bowels, his apprehensions were so urgent that I gave way, to sanction a free cupping from the nape of the neck. This, with fresh aperients, subdued the head symptom, which did not afterwards return. I believed at this time in the existence of some mechanical op-

position to the transmission along the colon of the contents, although I could discover no tumour to prove the presence of structural disease. He then passed some time in London, and an idea of stricture having taken possession of his mind, he consulted persons who profess to cure that complaint, and who, of course, found stricture of the rectum. He took, also, various advice, and was treated for "torpid liver," and for "constipation," for which he went through a violent course of purgatives. On his return I was again consulted, when I satisfied his mind that there could be no stricture at the outlet, as he could pass large scybala. On again examining him, no enlargement could be felt in the region of the liver, but there was still a fulness in the right side, showing that a delay of much larger quantity took place at that part than was consistent with the proper functions of the colon. It was now apparent that he had altered a good deal; his eyes appeared large, though shrunken; his complexion, too, was somewhat changed to a dirty opaque hue; he had decidedly lost flesh, having been previously a robust, muscular man; he seemed wholly absorbed in anxiety

for his health; his nights had become restless, and his appetite was impaired, and he now and then vomited his breakfast. Mild aperient pills, combined with opiate, over night, followed by aperient draughts in the morning, succeeded for some little time in affording relief, although the opiate made him rather feverish.

He again went from home, and again went through a similar course of treatment as before, though from different hands; the only result from which was, that he returned weakened, and all his symptoms increased. In June, 1842, I saw him again, and frequently: at this time he was very shrunk in appearance, though yet not actually thin; he stooped as he walked, as if to relieve some tightness in the abdomen; his spirits were exceedingly depressed; and he was at one time possessed with the conviction of having some internal disease (constantly feeling and pressing with his hands, as if to try if he could reach the point where he had felt pain on pressure), and at another, confident of his recovery, declaring that he had no ailment but the imperfect action of the bowels. He experienced great weakness, and was

fatigued by the slightest exertion. His nights were restless, during which he suffered both from pain and fever: he sought all positions in bed, now getting short relief from lying on his stomach, and now with his knees bent: and his favourite position when up was resting his forehead against the sofa, and his knees bent, in order to relax the abdomen. He was at this time greatly distressed by hiccup, which seldom left him for long together, and was peculiarly violent in the night. His tongue had become aphthous, but up to this period it had been a little coated and moist, though not more coated than is common when active medicines are taken. His urine was always abundant, and light-coloured. A careful examination at this time still showed the existence of a large accumulation in the colon: the part was rather tender on pressure. At the pit of the stomach, however, just above the arch of the colon, a fulness could now for the first time be perceived. He felt pain when this part was examined, and exclaimed with eagerness that the precise point was at length detected, and expressed satisfaction, as if he thought the knowledge must be followed by a cure.

I have only from this time to record the continual aggravation of all the symptoms mentioned. The tumour became more perceptible as he became thinner, and particularly so when the ascending colon had been emptied. Under these symptoms he gradually declined, fearful exhaustion, followed by perspirations, came on after evacuations from the bowels towards the close of life, and he continued sensible almost to the last, though very irritable.

Examination of the Body twenty-four hours after death.

The body was wasted, but not emaciated; the parietes contained fat in considerable quantity. The larger curvature of the stomach, the head of the pancreas, and a part of the arch of the colon, were all involved in a mass of encephaloid deposit, and adherent by lymph, which had been freely poured out. The diseased deposit appeared to have its origin in the mesocolon. The arch of the colon was for several inches contracted, and pressed upon by the medullary deposit. The coats of the bowel at this point were also the seat of change; the proper structure of the serous and muscular coats

was being absorbed, and replaced by the deposit of a dark-coloured and softer material, and the mucous membrane was in a state of granular ulceration. The cæcum, and the ascending colon and arch, as far as the point where the diseased deposit interfered with the calibre of the bowel, were much distended, but very little feculent matter was contained in them. There was no apparent disease in the other viscera of the abdomen, except the liver, which was thickly studded with tubera of encephaloid matter, varying in size from that of a pea to a small walnut.

The gall bladder was full, and contained several large gall-stones.

The lungs were healthy, as was also the heart.

The case just given I have selected both because I had the opportunity of tracing it from the commencement to the close, as well as that the history includes nearly all the symptoms which characterise the disease. I shall only refer in the following other cases, of which I have also had inspections after death, to certain prominent symptoms, which differ in some degree from the case above detailed.

In one, which I saw at intervals for six months,

there was the obstinate constipation in the beginning, with occasional vomitings. Some months before death the symptoms were—aphthous tongue, hiccup, or convulsive retching nearly allied to it, frequent diarrhœa, hæmorrhage from the bowels, and great dyspnœa. Nine months previously, there had been a severe attack of pneumonia, with bloody expectoration. From that time were dated the constipation and all the foregoing symptoms. Being of a gouty habit, many of these had been attributed to gout in the system.

The examination after death showed a mass of medullary matter attached to the larger curvature, which involved the pancreas and the arch of the colon: ulceration had found its way both into the stomach and into the colon: the liver was much enlarged, by the deposit of medullary matter, and the gall bladder was full.

The lungs were studded with encephaloid tubera of small size.

In another, the most prominent symptoms were—the usual constipation, and the later stage of the disease was marked by fever, continual retching, great wasting of the flesh, hiccup and

urning and intense pain at the pit of the stomach: the inspection showed that the diseased mass, with its adhesions, had encroached more upon the stomach than the colon.

I regret that I have no drawings of any of these cases. In consequence of the disease being so widely extended, it is impossible to convey an adequate idea of its character by the delineation of any portion that could be conveyed to an artist.

GENERAL REMARKS.

From the small amount of evidence of structural disease, coupled with the patient's own convictions, it often happens that the earlier stages of this disease are considered as merely functional derangements.

The symptoms which have been detailed are the general characteristics of the disease, and are not to be looked for in the progress of any single case, though they have all been found together when life has been continued long enough for the organs to become involved. It is obvious that, according to

the organs included in the disease, their different functions will be interfered with. Amongst the most constant symptoms of the first stage of the complaint is the sensation of load in the bowels. Relief is only obtained by several daily evacuations, and the uneasy sensations again daily return. This partial relief may arise from the actual removal of a lodgment of feculent matter in the arch of the colon, or by the aperient acting as an antiphlogistic measure, by causing increased secretion from the mucous coat: but I am inclined to think, from the fact that the uneasy sensations recur again so soon after copious action of the bowels, that the uneasiness is rather to be attributed to the presence of the carcinomatous deposit, and its progressing adhesions, than to accumulation within the bowel, to which the patient always attributes it.

In every stage of the complaint the evacuations will give evidence of there having been accumulation in the colon, which will seem to call for the repetition of purgatives; but as the difficulty to be overcome is after all merely a symptom, it is necessary to be cautious in subjecting the patient to a severe discipline which could only be warranted

on the supposition that the endurance would be rewarded by permanent benefit.

It is, however, absolutely requisite to relieve the patient by aperients; and before that decided change has occurred in the complexion which marks the presence of carcinomatous disease, calomel with simple extract of colocynth, in doses of five grains each, may be safely given every other night, for three or four doses, followed each morning by an aperient draught of infusion of senna and compound decoction of aloes, with a couple of drachms of potassio-tartrate of soda and manna, or the draught may be varied by substituting sulphate of magnesia for the soda; but as the disease proceeds, and the flesh wastes, and the usual symptoms of cancerous disease become evident, we must be careful not to exhaust the patient's strength while we strive to gain a point, which, when attained, will not afford sufficiently enduring comfort to compensate for the distress given. This caution is of still more importance as the disease extends to the colon: at that time all purgatives should be sedulously avoided, and the mildest and most comforting aperients only should be had recourse to. It is

obvious that great distress must be felt by the presence of purgatives, where membranes are so highly irritable as the mucous lining must be when just on the verge of ulceration; and there will even be danger of hurrying the abrasion of the surface by the use of any but the most gentle stimulants that can be found sufficient to effect the relief required. A sort of instinct prevents the stomach from thus suffering, since, when the coats are in an irritable state, they immediately reject any such medicines.

I would suggest, therefore, that, except at the very commencement of the disease, the mildest and most comforting aperients should be used. I have found the compound decoction of aloes, with or without rhubarb or jalap, most available in many cases; but the effect of any one set of aperients is very soon impaired by frequent use; and it is necessary, therefore, to vary them, and very useful to have occasional recourse to lavements of a gently stimulating composition.

The strength of the patient should be supported by such food as is agreeable and most likely to be retained. Milk, in different forms, is most usually

found to suit. The fancy varies in different cases, but animal jellies and soups are usually found distasteful.

At an early period of the disease the deposit is evidently confined to a small space; the future ramifications have yet to be determined; and the symptoms obviously vary according to the progress of the encroachment: thus hepatic symptoms become more prominent as the disease proceeds towards the duodenum and pylorus. Mechanical opposition to the food from the stomach begins, and vomiting comes on. The vomiting is not of the same kind as that in cases of ulceration of the mucous lining; it is full and free, as in scirrhus pylorus: the stomach becomes habitually distended, and admits of a large accumulation of contents, which are sometimes retained for a period of twenty-four hours or more, and then rejected all at once, without any accompanying nausea. The stomach, being comparatively in a sound state, craves for food immediately after it has got rid of the contents, and hence the voracious appetite which is sometimes experienced. The eagerness for food is

also to be attributed to a sense of relief obtained by a full state of the organ which replaces the neighbouring viscera in their easiest relative position: in such a case, it is impossible to deny the patient the solid food which he desires.

The shortness of breath and panting on slight exertion in most cases proceed only from debility and failing power. The severer form of dyspnœa is a symptom which becomes more prominent when the deposit extends to the lungs: it arises from mechanical interference with the circulation, and with the natural functions of the lungs, rather than from any irritation caused by the deposit.

The vomiting of dark-coloured fluid does not point out the existence of ulceration in the stomach: it may arise merely from irritation of the nervous ganglia, or from a depraved state of the blood itself, in which the vessels are no longer able to retain the thinner parts.

The diarrhœa and dysenteric symptoms are the consequence of the extension of the irritation to the mucous coat of the colon, independently of the above-named state of vessels. Hæmorrhage may

result from obstruction to the return of blood through the vena porta, or from ulceration.

Effusion into the cavity of the peritoneum is a rare symptom. It arises from obstruction to the returning blood through the vena porta, consequent upon the extensive secondary deposit of encephaloid tubera in the liver.

Hiccup is a most distressing symptom: it sometimes depends upon accumulation in the colon, but in these cases it depends more frequently upon the extension to the diaphragm of the irritation which arises from the deposit and from the accompanying adhesions. When it is urgent in the night, anti-spasmodics and opiates cannot be dispensed with.

The shivering fit and delirium, mentioned in the symptoms, take place at the time when ulceration finds its way either into the stomach or into the colon.

It is a necessary caution, in examining a patient, to bear in mind the fact, that considerable accumulation always exists in the colon; as the attempts to dislodge it by aperients seldom wholly succeed, there remains a real enlargement depend-

ent upon imperfect function, which may be so confounded with the carcinomatous deposit, as to occasion the real disease to be overlooked, or considered as part of that which is functional.

In this, as in the other forms of carcinoma, I still think that a plan of alterative treatment ought to be adopted at the very earliest period when it is possible to recognize the disease, and diligently pursued; to give room for hope, it must be commenced very early, for the probability of arresting the development by such means, diminishes according as the disease makes progress; and as the symptoms become prominent, but little prospect of success remains. I shall revert to this topic at the conclusion, in some brief remarks on general treatment.

CHAPTER VIII.

MALIGNANT ULCERATION OF THE COLON.

MALIGNANT ulceration of the bowel would hardly be classed as a carcinomatous disease, except for the accompanying secondary deposit of encephaloid matter in the liver, as there occurs no such deposit at the seat of ulceration. The general symptoms of malignant ulceration, are the same as those which accompany deposit of cancerous matter in other parts of the system. There is the same loss of flesh, change of colour and complexion, the same cast of countenance and anxious look. The pulse and tongue are alike natural up to a late period. Where ulceration occurs in the colon, the commencement of the disease is marked by dysenteric symptoms, which appear many months before the disease approaches a crisis. The symptoms become chronic, the ulceration which gives rise to them proceeds through the coats, and as an in-

instinctive act in the system, to prevent a rupture into the cavity of the abdomen, lymph is poured out, and neighbouring organs are agglutinated together. The lymph which is thrown out is of a smoky hue, of a melanotic tinge, and is easily torn through. The bladder in the male, and the vagina in the female, are parts often thus involved.

A shivering fit, accompanied by delirium, marks the time when perforation finds its way through the coats.

This process of throwing out lymph, which is called instinctive, or by others preservative, is in fact more properly but a prolonged process of destruction. It occurs only in chronic disease, and where the constitution is in a failing state, and never in early life, and in acute disease, when such a restorative effort on the part of nature would be naturally looked for.

I have notes of a case of the above disease, where malignant ulceration occurred in the sigmoid flexure of the colon, in which lymph was poured out, and a union with the bladder took place, permitting the contents of the bowel to pass through the bladder, and the urine in turn to irritate the

rectum: in this case the liver was extensively studded with encephaloid deposit.

The patient had through life suffered from indigestion and from gall stones, and spasm of the gall ducts: a large gall stone was found in the gall bladder.

Ulceration may, however, take place in the cæcum which is not of malignant character; it is consequent upon obstipation. I shall allude to it when I speak of functional derangement of the colon.

CHAPTER IX.

SECONDARY DEPOSIT OF ENCEPHALOID MATTER IN
THE LIVER.

THE matter of carcinoma, when deposited in the liver, is always of a soft, pulpy, homogeneous character, of a cream colour and opaque: the deposit takes place in the cellular tissue, in all parts of the organ alike: it is deposited in the form of tubera, varying in size from a pin's head to several inches in diameter: it appears that the larger are sometimes formed by the coalescing of the smaller tubera. These tubera gradually displace the proper structure of the liver. They are sometimes elevated above the surface of the organ, and sometimes not: when they are elevated they become vascular and rather depressed in the middle, having vessels as if radiating from the centre: in this case corresponding tubera are frequently found beneath the serous covering of

the diaphragm. The liver is always enlarged in proportion to the amount of the deposit; it extends below the margins of the ribs, and its acute margin becomes rounded. The structure of the liver between the deposited medullary matter is apparently natural. Pain is not felt during examination of the liver, unless the tubera be elevated above the surface, but the liver would, in the absence of elevated tubera, be hard and resisting, and its margin thick: when the tubera are elevated they may be felt more or less plainly through the parietes in proportion to the emaciation. The deposit of medullary matter takes place so gradually that there is time for the system to accommodate itself to the altered condition of the organ; so that a liver may be very much enlarged without any prominent symptom to mark the change which is going forward.

The gall bladder is almost always full, and most frequently contains a large gall stone: the full gall bladder and presence of gall stones, are chiefly the attendants of the disease in the pylorus. As a consequence of the deposit of tubera, the blood returning through the liver is obstructed and

ascites takes place: this, however, is a very rare occurrence.

That the liver should be infected with secondary deposit by means of blood returning directly from the stomach, through the portal system, seems a most plausible supposition; but I do not see sufficient grounds for excluding the mode of propagation observed in external cancer when the extension of the disease along the absorbents can be traced.

There is an apparent objection to the theory of a direct communication through the blood in the following fact; viz. that though the cardiac and pyloric orifices are supplied with blood by the same set of vessels, and the return of blood from both is equally by the vena porta, yet I have never seen a case of carcinoma of the cardiac orifice of the stomach, in which encephaloid deposit in the liver has been found.

It might be urged that there exists a greater similarity of function, a closer physiological union, between the pylorus and the liver; but carcinoma in the larger curvature is accompanied by secondary deposit, which can claim no closer union with the liver than can the cardiac orifice.

This objection may be met by considering the short period to which life is prolonged in cases where the disease is primarily set up in the cardiac orifice of the stomach, a period short of that at which secondary deposit takes place.

The absence of medullary tubera in the liver in cases of carcinoma of the œsophagus is also to be referred to the same rapidity of the destructive process, which does not allow time for the secondary deposit. It remains to be taken into consideration, that the great activity of the absorbents, as evidenced by the emaciation, prevents the deposit of foreign matter. The body is thrown on its own resources for nutriment, supply from without being either wholly or in part cut off; every substance, therefore, which is capable of being absorbed, is taken up, in order to prolong existence.

In regard to the hypothesis of infection by contact I would refer to case Number 7., in which tubera were developed in the diaphragm corresponding to similar tubera in the liver; the tubera having been vascular, and elevated above the surface, causing considerable friction of the serous membrane. I must, however, observe on this subject,

that I have also memoranda and drawings of a case of encephaloid tubera in the lungs, in which the tubera projected half an inch above the surface of the pulmonary pleura, where a considerable amount of friction must have taken place, and yet where no development of tubera occurred in the costal pleura.

However much we may admit these several modes of propagation of the disease, from any particular part, when it is already in an advanced state, it is impossible to lose sight of the fact before stated, that the disease is constitutional, and that, after being primarily set up in the stomach, deposit of carcinomatous matter takes place in the other viscera, in succeeding periods, according as the life of the patient is or is not sufficiently prolonged.

CHAPTER X.

HEREDITARY NATURE OF CARCINOMA.

CARCINOMATOUS disease of the stomach is not of very unfrequent occurrence. The period of life at which it appears is always after the meridian has been passed. I believe that in earlier times, when true pathology was even less understood than it has been of late, a large portion of the heterogeneous class called climacteric diseases should properly have been referred to the subject of our present treatise; and even now, in common phraseology, it is often called the breaking up of the constitution. I believe there are few cases on record where the disease has made its appearance before the fortieth year. According to my own observation, the age most obnoxious to it is from 55 to 70. I have mentioned one case at the age of 78, and I remember to have seen one at 80.

The whole class of cancerous diseases, wherever situated, is usually considered to be transmissible through succeeding generations, or, in one word,

to be hereditary. However unwillingly this opinion may be received, I am not aware that it can be contravened, but the fact becomes less repugnant to the feelings when it is considered that nearly all structural diseases are included in the same category. Scrofula, phthisis pulmonalis, insanity, and even gout and many more diseases are found to pass by descent through families; and it may be inquired where there exists a family of which some members have not been the subjects of these, or of equally distressing maladies?

The word hereditary, as applied to disease, loses yet more of its fearful import when it is known that it by no means presupposes the appearance of its ravages in every generation. Instances not only occur, but may be said to prevail, in which alternate generations are passed over unattacked; and it is always doubtful how far the intermixture of blood, not subject as yet to a similar class of complaints, may modify the tendency, ere its period for development recurs.

There is also a consolation in the belief, which is borne out by general observation, that families in which one form of disease very much prevails

are peculiarly exempt from maladies of some other class. It has been stated as the result of statistical inquiry, that families which are subject to cancerous affections are rarely attacked by pulmonary consumption; and, supposing this to be established, painful as their appointed portion (a disease so fearful as that which we have been considering) may appear, who shall deny that it is the milder alternative? Who would not exchange the blight that withers bud and bloom in their spring, for the autumnal storm, however rude, which can but "shake the sear leaves off the tree?"

CHAPTER XI.

HYPERTROPHY OF THE COATS OF THE STOMACH.

I HAVE now to allude to another variety of alteration of structure in the coats of the stomach ; it occurs less frequently than carcinoma, from which it appears to differ materially, though it has sometimes been classed under diseases of that nature, and still by many is considered as only an earlier stage of carcinoma.

The subjects of this disease are generally between the ages of 40 and 50, and are persons who have indulged in the use of stimulants.

The disease consists of a state of hypertrophy of the coats of the stomach. I have met with it only in the pyloric extremity.

It seems to have been commenced by some effort to overcome an obstruction at the pylorus, which has tended to narrow the opening; by a sort of instinctive process the coats become thickened, and their structure added to, so acquiring additional

power to perform the effort required. The disease may also be attributed to irritation, or chronic inflammation, which has not been subdued, but which, on the contrary, has been continued and aggravated by repeated indulgence in stimulants. The capillary circulation of the mucous coat is thus for a long time increased ; the muscular coat partakes of the irritation, and hypertrophy is the consequence. On a section being made of the coats of the stomach, the interlacing of the fibres of the muscular coat is very apparent and peculiar. The other viscera are not affected constitutionally, and hence we are not compelled to place this in the class of constitutional or hereditary diseases. This disease is preceded by morning sickness, and want of appetite ; in the later stages the general symptoms are constant retching and sickness ; great impatience for drink, which, of whatever quality, and in whatever quantity, is always immediately rejected. Dark-coloured fluid is also vomited in large quantity. Everything taken into the stomach gives pain, and causes not only its own rejection, but also copious vomiting of vitiated secretion from the mucous lining of the stomach. There are heats

and chills, and the pulse is quick and the tongue furred. Pain is usually felt on pressure at the pit of the stomach, but not invariably; more so, probably, in cases which owe their origin to unsubdued chronic inflammation than to mere obstruction at the pylorus.

Emaciation is not a symptom of the disease, and hence its absence negatively distinguishes the complaint from carcinoma.

I select the following cases as examples, having obtained post-mortem examinations:—

Case No. 16.

Hypertrophy of the stomach.

Mrs. D——, aged 45.

I was asked to see her in consultation with Dr. Horner, of Hull. I found her vomiting large quantities of dark-coloured fluid, of which certain parts separated on standing, and formed a sediment. The vomiting was so continued as scarcely to allow of an interval of five or ten minutes at a time. Any thing which she took immediately returned, together with a large quantity of the

dark-coloured fluid. At this time she complained of no pain, nor was any experienced on pressure. Her pulse was very quick, and her tongue much furred. The bowels were confined. Her face was flushed, and she was inclined to drowsiness. She was at this time very fat in person, and of florid complexion.

The history of the case consisted in her sickness having been experienced for some time, especially in the mornings, until about a week before I saw her, when the symptoms I was called to witness had become more urgent, and had not yielded to treatment. The drowsy state in which I found her gradually increased upon her, and she died in forty-eight hours.

Inspection made by Mr. Wallis twenty-four hours after death.

Body very fat. Several inches in the parietes of the abdomen.

The stomach was found very much distended by the same kind of dark fluid which she had vomited. The intestines were also filled with the same dark-

coloured fluid. Near to the pylorus the sub-mucous cellular tissue, and the muscular coat of the stomach, were much thickened.

The muscular coat was more fleshy and striated than in carcinomatous infiltration. The mucous coat was thickened, congested, and softened. The mucous follicles of the duodenum were enlarged.

The liver was soft, and gorged with blood; but without any trace of medullary deposit. The gall bladder was contracted over three gall stones, which were sacculated and surrounded by some purulent mucus. The cystic duct was plugged up by a gall stone, which by its pressure had set up ulceration of the lining membrane. The hepatic and common ducts were natural. The omentum was adherent at one point to the stomach.

REMARKS.

It was at first supposed that this was a cancerous stomach; but subsequent examination of the morbid parts, together with the absence of the train of symptoms and usual history of carci-

nomatous disease, led to the opinion that the altered condition of the coats was merely the result of chronic inflammation.

The thickened condition of the muscular coat must be considered upon this supposition merely hypertrophy, induced by the forced contractions to propel the contents of the stomach into the duodenum, as well as by the very frequent efforts to vomit. The original irritation may be referred to the use of stimulants. The thickening of the muscular coat differed from that which results from malignant infiltration, being more firm and fleshy, and less influenced by maceration.

The thickened and congested state of the mucous membrane also appeared much like the effect of chronic inflammation, and continued irritation of the capillaries of the part.

The following case is of the same character as the preceding; the habits of life were the same, and the symptoms, though they did not proceed so rapidly to a fatal termination, were very similar.

Case No. 17.

Hypertrophy of the stomach : continual vomiting.

Mr. H——, aged 49, a traveller for a mercantile house in the wine and spirit trade.

He had been an active man of business, and in the course of seeking orders for his trade, had been led into convivial habits, which increased to an extreme degree. When I first saw him he was vomiting continually, always calling for liquids, toast and water, soda water, and even brandy and water; all of which were immediately rejected, together with a large quantity of mucous secretion, from the stomach. He was moaning, and restless, and seemed to find most relief by lying upon his stomach, rather on one side, and was very disinclined to be questioned, though anxious for relief. His pulse was small and quick, his tongue furred, and the urine high-coloured.

On examination, the slightest pressure at the pit of the stomach caused him great pain. He said, *there* was situated all his misery, and unless something were done, and soon, to relieve it, he must die.

All these symptoms had come on about a week before, and had continued increasing to the period of my seeing him. For a long time previous to their appearance he had suffered from morning sickness, want of appetite, occasional pain, and flatulence. He attributed his discomforts to his mode of life, and confessed that he usually sought to relieve them by additional stimulants. He was still a fine-looking, muscular man, not at all emaciated.

General depletion was not ventured upon, as he had recently been the subject of delirium tremens; the most active local antiphlogistic measures were resorted to, but without giving relief. Nothing which was done seemed to have any control over the sickness, which was continued to the last. He only lived a few days.

Examination of the Body twenty-four hours after death.

On opening the body the parietes were well stored with fat.

The stomach was the seat of considerable change; the lining membrane was of a dull red

colour; the opening into the duodenum was narrowed, but freely admitted the finger; the muscular and mucous coats were found hypertrophied. The muscular coat was firm, rather than hard like scirrhus; the mucous coat softer than natural, and thickened and injected. The same peculiar interlacing of the muscular fibres was seen as in the last case. (See Plate 9.)

The liver was large, and when cut into, of a paler colour than natural, rather inclined to yellow; there had been previously no tinge of yellow in the complexion.

CHAPTER XII.

PERFORATION OF THE STOMACH BY ULCERATION,
ATTENDED WITH INDURATION OF THE COATS. —
FATAL PERITONITIS.

WE now and then meet with cases of perforation of the stomach attended with induration of the coats, the induration occupying a space about the size of a shilling or rather larger, with a small round smooth hole ulcerated through it, as smooth almost as the opening from an artery into an aneurism at the point where the inner and middle coats have given way.

A communication is thus made between the interior of the stomach and the peritoneum; the contents of the stomach become poured into the peritoneal cavity, and peritonitis, which is immediately set up, soon destroys life; usually within thirty-six hours, frequently in twenty-four, and with dreadful suffering.

It is difficult to say on what these indurations

and perforations depend. They are met with in young persons, chiefly in young women; and the subjects of the disease are otherwise apparently in good health, and generally fat.

It would be incorrect to class these alterations or lesions of structure with scirrhus deposit; they seem to owe their origin to some incidental cause in the first instance. The state of induration of the coats, and in some cases the presence of symptoms indicating a morbid condition of the stomach, would strengthen the belief that they are developed or matured by chronic action.

I give the following as an instance of this disease, as I obtained a post-mortem examination.

Case No. 18.

Perforation of the stomach, with induration of the coats. — Peritonitis fatal in thirty-one hours.

Margaret Letson, aged 26.

Was suddenly seized on 25th of February, 1845, at three P. M., with excruciating pains in the abdomen. Her agony was extreme, and she referred her pain to a point below the pit of the stomach:

she had been treated by Mr. Sherwin for colic, the presence of which the symptoms appeared to indicate. I saw her for the first time on the 26th at three P. M. Her sufferings appeared to be fearfully intense ; she was on her hands and knees in bed, seeking some endurable position ; her pain continued at the same part, as well as diffused over the whole abdomen : her pulse was about eighty, but small, and there was a tendency to fainting, and the extremities were rather cold. She made frequent efforts to relieve her bowels, but could not succeed. No doubt existed in our minds that some internal rupture had occurred. We saw her again in the evening about seven, when she was more faint, and her extremities colder and dark-coloured, and her pulse actually imperceptible, and yet she still had determination to get up, in the hope of having relief from her bowels. The intense pain and restlessness continued until she died, at half past nine.

On enquiry of her mistress, I learnt that the girl, who was very industrious and hard-working, had appeared in perfect health, except that of late she had had a very capricious appetite ; as

soon as she had taken a single cup of tea and a piece of buttered bread, she used to observe that she had eaten enough to serve her the whole day, though her appetite had been pretty good on commencing her breakfast.

Examination of the Body, by Mr. Sherwin, nineteen hours after death.

The entire figure was plump and robust.

On opening the abdomen, the parietes were found well stored with fat, an inch in thickness. Several pints of straw-coloured serum escaped. The peritoneum was freely injected with pink vessels, also the omentum and the surface of the viscera; lymph was thickly deposited over the surface of the liver, which was adherent to the parietes by many old bands; the intestines were filled with gas; the ileum was much glued together in folds by recent lymph; the bladder was contracted.

On examining the stomach, a small oval opening about the size of a horse bean, was discovered in its anterior and upper surface quite through the coats. On opening the stomach the lining membrane showed several patches of vascular arbo-

rescence. Around the opening, the coats were thickened over an area somewhat more than an inch; on one side the thickness was also nearly to the same extent: the edges of the opening were quite smooth, and such as might have been produced if it had been made in the part by what workmen call a punch.

The contents of the stomach were found in the cavity of the abdomen.

Ulceration and perforation also take place in the bowels; the ileum is, in most cases, the seat of the lesion. These ulcerations, as is well known, are frequent in fever of remittent type; the ulceration commences in the follicles of the mucous membrane of the ileum. Though these cases are constantly recorded, I add the following, because the drawing showing the exact state of the part may give it an interest.

CASE No. 19.

Perforation of the Ileum after relapse in remittent fever.

Captain A——, aged 30.

Had suffered from remittent fever. He had been attended by Mr. Casson for several weeks, and

appeared to be recovering, when, in consequence of some error in diet, he had a relapse, on account of which I was sent for; I found him delirious and sullen, his face flushed a bright scarlet, his tongue white, as if stained with milk, his pulse frequent and undulating, his bowels open, the evacuations liquid and rather bloody; the abdomen, which was not distended by air, was very carefully examined, and no pain or even tenderness was discovered any where on pressure. The following day he seemed, on the whole, rather better; but while at the night-table he experienced a sensation as if something had given way in the right iliac region. I found him after this in bed, pale, anxious, but without delirium, and complaining of exquisite pain in his abdomen; the pulse weak, but sharp and rapid. He soon again became delirious; he vomited dark coffee-coloured fluid, and died in twenty hours after the period of the rupture.

Examination of the Body twenty-four hours after death.

On opening the abdomen, the whole peritoneal coat was injected with blood, giving a pinky hue all

over the covering of the intestines the folds of the bowels were not adherent by lymph, but recent lymph was in several places to be seen between adjoining folds; a small opening not half the size of a sixpence was seen in the ileum, through which the contents of the bowels had been poured into the cavity of the peritoneum.

On opening the intestine, the mucous membrane was found ulcerated in many places, having in some of the ulcers a peculiar bluish green colour. Several of these ulcers were of a roundish form, and seemed still to have the mucous membrane at the bottom; the ulcers had their edges or margins elevated, and there was a manifest depression and loss of substance in the mucous membrane: the villi appeared to have been destroyed. (See Plate, No. 10.)

REMARKS.

It is remarkable in this case that when pressure was made all over the abdomen, there was no pain apparently experienced, although, judging from the state in which the mucous membrane was found after death, it must at that time have been deeply ulcerated, and in the place which afterwards gave way,

the ulceration must have already reached the peritoneal coat; some of the ulcers were to all appearance in a state of inactivity, if not of progress towards healing, which, coupled with the appearance of convalescence, shows that in all probability (the age of the patient being taken into the account) the mischief might have been repaired, had not some imprudence in diet again set up action in the part.

CHAPTER XIII.

OBSERVATIONS ON TREATMENT.

ALTHOUGH it is apparent that the difficulty must always be great in distinguishing between functional disorder and the early setting in of structural disease, there are strong motives for striving to obtain a distinct apprehension of that important point with the smallest possible delay; since, in reference to treatment, the course to be pursued must be regulated according to the decision. The first symptoms apparent in structural disease simulate those of mere disordered functions, but they are in reality the consequence of the deposit, which commences a process of irritation, tending towards disorganisation in the mucous membrane; in other words, they are the consequence of a certain degree of actual change of structure; it is plain, therefore, that treatment must be directed not merely to restore the healthy state of the secretions, but to counteract the constitutional state of

tendency to morbid deposit; and the object to be sought for can unhappily only be (not that of perfect restoration, but) the means to retard the progress or control the advance of the development, and to prevent in some degree threatened encroachments upon important organs. This is the utmost that hope dares to point to, and unhappily more than can often be attained.

As soon as the symptoms fairly indicate that the disease is in the larger curvature, or in the pylorus, as we have endeavoured to show they may do before ulceration commences, and long before positive evidence is given in the form of tumour, a course of active counter-irritants should be immediately adopted. Local depletion, either at the pit of the stomach or over the spine, may succeed in checking or retarding the irritation of the mucous coat, and blisters may be applied as near to the seat of pain as possible. It is necessary at the same time to discontinue all aperient medicines which tend to irritate the mucous membrane of the stomach, and to choose such as act upon the colon, since we must seek to obtain enlarged secretion from the mucous membrane of the bowels, both as

a counter-irritant and as a measure of depletion. The occasional and moderate use of calomel, un-mixed with any irritating purgative, or of hydrargyrum-cum-creta, is a most useful adjunct. There is evidence in several ways that counter-irritation has apparent power in this disease. The appearance of gout and erysipelas seem to stay the progress for a time. In Case No. 8., there is an instance of an external ulcerated tumour in the groin, which seemed to divert the course of the disease.

Simple astringents, as lime water given in milk, and sedatives, may be usefully employed in this stage of structural disease, in the same way as if the secretions, intended to be corrected, were the result of mere disordered function. All stronger astringents should be carefully avoided. The opiates should be sparingly had recourse to, as there will be too much occasion for their aid in succeeding periods of severer trial; they may be usefully combined with alkalis, if indicated, and with hydro-cyanic acid. The diet should at once be changed, to avoid all irritating, stimulating food. The simple animal food which is so useful in

common dyspepsia will be too irritating for this stage; beef and chicken tea would not be objectionable, but there is generally a distaste for them. Milk is the only animal food which is generally agreeable, and it is highly appropriate. Pure air, quiet, rest from great exertion, whether mental or bodily, but especially the latter, should be sought.

When the disease is so fully established that the mucous membrane has given way, and has become ulcerated, the treatment must be confined to sedatives and soothing remedies, and to the sedulous avoidance of any thing, whether in diet or medicine, the application of which would be likely to irritate an internal open sore. I am, however, still decidedly of opinion that counter-irritants procure relief to the suffering, but they must be used with the utmost care, to avoid increasing the debilitated state of the patient, as the fearful loss of strength is a serious addition to the distress of pain. The counter-irritants must also not be applied to the immediate seat of the deposit; for as the disease extends more nearly to the parietes, and adhesions take place, irritation in the immediate neighbourhood may rather do harm

than good, and at any rate increase the internal pain; whereas the object of the counter-irritant is not only to retard encroachment on other organs, but to divert vascular action to another part. Any part of the chest is, therefore, to be preferred; and in regard to size and continuance, the counter-irritants must be carefully regulated, so as not to assist in reducing the strength. I have found blisters the best form, and antimony should be carefully avoided.

It is highly desirable, if possible, to keep up the natural muscular movements of the canal, in order to keep off any thing like inverted action, producing vomiting, but the utmost care and discretion are necessary in the use of aperients. As they have all to be in contact with an open ulcer, nothing that could be painful to a surface in such a state should be used.

Mercurials give probably the least irritation when judiciously given, and in small quantities. Borax, with a view to soothe the pain from soreness of the surface, and very weak nitric acid, as tending to cleanse the impurity, may both be used as palliatives. I have seen great benefit, even at

this time, from the sedative effects of hydro-cyanic acid, but it is impossible to dispense with the use of morphia. With so much pain to be overcome, and so much restlessness, it is impossible to withhold such a source of comfort; and the general effect on the system is not so injurious as when there is a less fearful state of disease.

When carcinomatous disease attacks the œsophagus and cardia, the counter-irritant plan must be avoided near to the seat of the disease, and this is more particularly to be regarded the higher the disease is situated in the œsophagus.

The proximity of the trachea, and its proneness to inflammation, render the use of blisters on the throat an error always to be avoided. The power of receiving food into the stomach varies in different cases; and of course any thing not of an irritating nature, that can possibly be taken, must be permitted. It sometimes happens that a small portion of a solid substance may be forced down when fluids cannot find their way.

The treatment of carcinomatous disease when the deposit takes place in the neighbourhood of the stomach, but external to it, must take a wide

range, having regard to the different organs whose functions become interfered with. I have already remarked on the too indiscriminate use of purgative medicines in this case, and on the general treatment, in the chapter on the disease in this form. I will only pause here to repeat that, while palliative measures are applied to each of the symptoms as they arise, those which are intended to meet the inactive state of the lower bowel, should be administered with the utmost caution and judgment. I have previously given the reasons for this caution, and I conceive that the physician's attendance can be in no way more useful than in protecting the patient from additional suffering from the inconsiderate use of purgatives.

PART II.

ON SOME OF THE FUNCTIONAL DISEASES OF THE
STOMACH AND ALIMENTARY CANAL.

CHAPTER I.

CURSORY OBSERVATIONS ON FUNCTIONAL DERANGE-
MENT OF THE DIGESTIVE ORGANS.

HAVING considered the chief diseases of the stomach which consist in disorganisation of structure, we now proceed to a less formidable class—those which are the result of functional derangement. The treatment of these is a far less distressing task to the physician, but it is not exempt from many difficulties and discouragements.

In structural disease the physician is called upon to sympathise most painfully with sufferings which he knows to be beyond the reach of art, or to which he can at best afford but temporary alleviation. It is true that in the course of the destructive process a remarkable rally often takes place, as if

the constitution were gathering strength to shake off the complaint, but this intermission brings little satisfaction to the medical attendant. Amid flattering indications of general improvement, his practised eye recognises some fatal symptom lingering about the patient; and while he faithfully withholds from the sufferer the wished-for words of gratulation and encouragement, or represses the rising hopes of anxious friends, he must often exclaim in bitterness, —

“ Oh! duty, duty, why art thou so stern ? ”

All is, indeed, throughout, most distressing; and there is but one reflection, which is in any way consolatory, — that by an undoubted knowledge of the seat and issue of the disease, the patient is saved the additional distress of experimental treatment, and the friends the shock of a too sudden bereavement after delusive hope.

In functional disease, on the other hand, the physician, though spared the pain of anticipating a long train of suffering tending to a fatal issue — though rejoicing in the knowledge that returning health may follow a judicious course of treatment — has, notwithstanding, many difficulties to encounter.

In the structural disease, time, as it developes the truth of his opinion, confirms the confidence of the friends, and as he has flattered the patient with no false prospects of a cure, the latter is grateful for every successful effort to mitigate his sufferings.

In the functional class the first glad hopes of ultimate recovery are often damped by long protracted illness; modifications of the complaint are so intricate, that remedies must occasionally be more or less experimental; finally, partial failure robs the physician of his influence over the mind of his patient, in whom the irritability of temperament peculiar to the complaint re-acts on the system, and retards the progress of recovery. Moral difficulties and artificial habits of society all combine to make the attendance too frequently conduce neither to comfort nor to reputation.

In comparing the frequency of the two classes of diseases of the stomach, we find the functional, happily, to be far the more frequent; but the symptoms which mark and accompany them are sometimes not less painful and protracted. It is usual to refer these diseases, and with great truth, to errors in diet and regimen. It is in the arbi-

trary power of every person to supply the organs of nourishment with either suitable or unsuitable material; to allow either reason or appetite to regulate the quantity supplied, and either to heed or to neglect those rules as to exercise and sleep, and the time for taking food, which reason and experience have taught him. Considering the important duties of the organs of digestion—the artificial customs of aristocratic life—the excess of indulgence in the middle classes—with the sedentary habits and confined atmosphere which their occupations often require—it is not to be wondered at that disease, the result of error, should occur. What, then, is to be expected, when to the above disturbing causes we add the influence of mental excitement (whether of intense study, anxiety, or dissipation,) over the involuntary as well as the voluntary functions of the body?

It is no part, however, of the physician's duty to regulate the fashions of society: he can only point out the source and consequence of error, and hope that the tide of custom will gradually flow in a more natural course. The last half century presents a happy instance of return to more rational

habits among the higher circles, in the disuse of wine in immoderate quantity ; and it is to be hoped that the luxuries of the table will give place to a more simple and reasonable mode of supplying the wants of nature. On these questions, "*nunquam aliud natura, aliud sapientia dicit.*"

Though derangement of the digestive organs may seem the appropriate penalty of aristocratic luxury, or of coarser excess among those who are removed from the restrictions of poverty, we dare not indulge in the comfortable belief that our poorer brethren are exempt from these diseases, thus enjoying a compensation for their state of want. Bad quality of food and meagre diet, the inability to obtain that change of nourishment requisite in different states of the alimentary canal, want of pure air, exercise, and sleep ; and above all, the sad resource to which misery is often driven, the abuse of spirituous and fermented liquors, produce among the poor their full share of derangement in the digestive organs. Dyspepsia is, however, less heard of amongst them ; their necessities compel them to disregard these minor evils, and continual exertion to provide the means of living forbids them

to dwell upon their own sensations. There is no doubt that a salutary influence is derived from this necessity. The richer sufferer often increases the actual derangement by permitting his attention and imagination to be constantly fixed on his complaints, as well as by resorting to artificial and arbitrary experiments. On the other hand, the poorer dyspeptic rouses every energy to maintain the power by which not only himself, but many others, are maintained, and at any rate he avoids complicating his disorders by the force of imagination, or by very hurtful experiments. A very simple system of domestic aperient treatment prevails amongst the poor, which in the uncomplicated form of dyspeptic disease is most appropriate and efficacious.

I by no means intend the following remarks to be a compendium of the functional diseases of the digestive organs. Such a treatise is not required; nor would it consist with the length to which I wish to extend these observations. I shall not even notice some of the functional complaints, and dwell only in a cursory manner on others, the history and treatment of which are fully understood,

and I shall confine myself to such remarks on pathology and practice as have forced themselves on my consideration, and which I hope may prove, at the least, not valueless.

The natural duty of the stomach is to effect those chemical changes upon the food which convert it into chyme, and which are requisite to prepare it for the admixture of the other fluids concerned in chyfication, such as the secretions from the liver and the pancreas. Digestion is effected by means of a secretion especially adapted for the purpose, which is poured out from the lining membrane of the stomach, and is also partly assisted by the aid of the muscular coat, which, by its contractions, presents every portion of the food in succession to the action of this secretion. The duty of the stomach is completed by other muscular movements, which pass the contents, when duly prepared, into the duodenum.

Dyspepsia, or indigestion, is the failure of the due performance of this function; in consequence of some altered condition of the mucous membrane, or of the gastric fluids, or of some defect in the proper movements of the muscular coat,

the contents remain in a state unfitted to be passed forward into the duodenum. The pylorus refuses to allow matter to pass, which is only imperfectly chymified, and a sort of reflex, or inverted action, takes place. The functions of the stomach, when healthily performed, are carried on without the consciousness of the individual; but when these reflex actions take place, notice is given by a variety of distressing sensations, such as pain and uneasiness coming on at variable periods after eating, nausea, sickness, headache, heartburn, pyrosis, flatulence, heart disturbance, and, lastly, constipation.

These symptoms indicating so many particular states of the disordered function, deserve to be treated severally as so many primary diseases. They claim our serious study, not only because each may be referred to its immediate exciting cause, but because they all require and admit of much direct relief by treatment.

I am not prepared to state that functional disturbance may not in some instances be first set up in the stomach or in the smaller bowels; but I should refer the primary seat of dyspepsia, in a vast

majority of cases, to a failure in the healthy performance of the duties of the colon; and the constipation, with which I have concluded the list of symptoms, I regard, in fact, as the primary and ruling cause of the disturbance throughout the whole canal. I shall recur to this, giving reasons for my opinion, hereafter; in the mean time, fearing that there may be many who may hesitate to accept the proposition, I can only say that though I am far from presuming to lay down any opinion of my own as an axiom, yet I have come to this conclusion by means of careful observation, and that every year's experience has added its corroborative testimony to the truth of it.

In most complaints the symptom which first forces itself on the attention is pain, and it is especially a prominent one in disorders of the stomach; it comes on at different periods after taking food; and as in each of these it seems to depend upon different causes, it has been divided according to the periods into so many different forms. That form which has been especially called *gastrodynia* comes on immediately on taking food; the pain continues as long as the food remains in the stomach,

and relief is only obtained after its rejection by vomiting, or after its being hurried forward through the pylorus. It appears here that the contact of food with the lining coat of the stomach produces pain, the membrane being in a state of increased irritability. This state is supposed by some to border on inflammatory action, which opinion is supported by the fact that antiphlogistic treatment is generally found the most effective to relieve it; apparently conflicting evidence is, however, met with in the opposite fact, that in some cases relief has been obtained by a stimulating plan, which would be highly aggravating were inflammation present. I am inclined to think that this is hardly to be taken as a valid argument against the morbid state being one of inflammatory tendency. It is to be conceived that the stimulating plan may afford temporary relief, by inducing the muscular coat to get rid of the contents of the stomach, which contents are, at the moment, the offending cause of distress, and immediate temporary relief may be thus gained at the expense of increasing the general excitement of the capillary circulation of the lining

membrane. Again, however, the stimulating plan of treatment is said not only to relieve, but in some cases to cure, the morbid state: this seems strong testimony against the inflammatory nature of the disease; but I yet hesitate to regard it as conclusive, since we know that inflammatory colds sometimes give way to stimulants, however dangerous or unphilosophical the experiment may be, and in certain inflammations, chiefly strumous, stimulating treatment is beneficial. My own experience leads me to prefer a mild and local antiphlogistic line of treatment as the most prudent and generally successful.

Pain is also experienced during the process of digestion, which is, in fact, true dyspepsia; the secretion thrown off from the mucous membrane, not being in a healthy state, becomes unequal to perform its function, one essential part of which is to protect the various substances taken into the stomach from reacting by chemical affinity on each other, and to preserve them from fermentation, decomposition, and, perhaps, putrefaction, all which changes would be, but for the presence of the secretion more easily induced when substances

are enclosed within the stomach, in consequence of the elevated temperature. The very secretion, also, the duty of which is to preserve substances from chemical reaction on each other, is itself, when in an unhealthy state, the leaven which sets in motion the process of fermentation. The pain of real dyspepsia comes on at variable periods, of from one to two or three hours after food has been received into the stomach; it is accompanied by headache, distension, heartburn, and rising into the mouth of acid, and sometimes greasy substances.

I do not conceive that the completely healthy condition of the secretions, the failure of which gives rise to this train of symptoms, can be satisfactorily restored, without referring them to their ultimate cause. I have already hinted that I should look to the more distant part of the alimentary canal, both to find the disturbing cause, and to apply the perfect remedy. The symptoms, in the mean time, demand a direct line of treatment, in order to obtain temporary relief without delay; for which purpose absorbents and alkalis are the most appropriate.

It is in true dyspepsia that we are especially

called upon to regulate the diet. Judging from the nature of the secretions contained in the stomach, it is not only possible, but desirable, to reason, to a certain extent, on the chemical nature of substances, how far they may be suitable or unsuitable to the state of the patient; but there is a limit to the degree of confidence with which any such prognostic of effects can be delivered; the peculiarities of chemical change within a living organ cannot be reasoned upon or tested as if the experiment were performed in the laboratory of the chemist. The utmost, therefore, that science can accomplish, is to suggest that which the probabilities, according to the best train of reasoning, show to be most appropriate.

The experience of almost every patient differs as to the substances which suit his peculiar case. I do not advocate an indiscriminate indulgence of desire in regard to diet; in health we see many who are prone to partake of viands which are obviously unwholesome; and amongst invalids there are instances of craving after particular sorts of food which it becomes a duty to protest against; but, as a prevailing rule, I should regard dyspeptic patients as most competent to decide on that which

they have proved by experience to suit them best, and I believe that Nature herself often suggests the peculiar aliment which is most likely to agree with the state of the organ.

Even in many persons who enjoy a vigorous state of the digestive organs, it is known that the irritability of the lining membrane is always excited by particular substances, which substances are, notwithstanding, both innocuous and salutary to other persons. Honey is a well-known instance, which appears so to act upon the stomach of some persons as to have almost the effect of poison, while it is used as a most nutritious article of diet by others; and it would be impossible for any chemical physician to predicate which of these two effects would take place in any individual. While thus glancing at the subject of diet, I am anxious to hint that the prevailing error on this point rarely consists so much in the choice of substances as in the quantity. In the form of dyspepsia, which we have been noticing, a large admixture of various sorts of food, increasing the chances of mutual chemical change, should obviously be avoided; but in healthy subjects it is more the

regular and duly-proportioned amount of duty given to the stomach to perform, which should be prudently attended to, rather than any great anxiety about commixtures, for which, man being an omnivorous feeder, the organ in the human subject is intended to be adapted. Dyspeptic patients should always be cautioned against fermented liquors; and it is always desirable to give particular trial to empyreumatic liquids, as coffee, taken hot immediately after dinner, since they possess the property of retarding, if not of preventing, fermentation. I mentioned the use of absorbents as the most reasonable line of treatment, and one which is usually effectual; I should also generally recommend that saccharine matter be used but sparingly; I know, however, of instances, although they may be considered as rare exceptions, in which habitual heart-burn has always been relieved in a temporary way by the use of acid fruits; and again, where uneasy sensations after eating have always subsided after taking a certain quantity of barley sugar or bonbons.

Whether gas be really secreted by the coats of the stomach, or whether it be evolved during

the chemical action of alimentary substances on each other, flatulent distension of the stomach is the consequence of its presence, and it is a very distressing symptom in dyspepsia; the coats of the stomach become greatly distended, and pain is experienced which extends over the whole chest; the pain is increased by exercise, and relieved by the recumbent posture; and during the state of distension there is the greatest dread of pressure over the pit of the stomach. It is to be relieved by alkalis, of which calcined magnesia is to be preferred, as, after neutralising acid in the stomach, it acts as an aperient. The flatulence of hysterical young women is of a different character; it is accompanied with cold extremities, and by a tendency to chilblains, and the stomach partakes of the general want of energy in the system; this state requires an invigorating tonic plan of treatment.

The empty state of the stomach is also a condition of pain in dyspeptic patients; it has been supposed to arise from the action of the secretions on the mucous coat: of course this presupposes the secretions to be in an unhealthy state, the primary cause of which I shall again refer to the seat which

I look upon as the origin of the greater part of functional disorders of the stomach. The pain is easily removed in a temporary way by any thing which distends the stomach, which at once restores the easy position of the viscera, and dilutes the secretion. The prevailing fashion of having tea before a late dinner is much to be attributed to the comfort obtained by its use in correcting these uneasy sensations in the stomach. Full relief can, however, only be obtained by the proper action of aperients. When this affection is of severer character, it is accompanied by vomiting of watery fluids in large quantities, either early in the morning or at a late hour in the day: there is also a sense of constriction in the diaphragm, and burning heat in the epigastric region; a distressed peculiar cast of countenance is to be observed in this complaint, described by some under the name of pyrosis. The too exclusive use of slops and farinacea conduces much to this form of dyspepsia. The judicious use of animal food, and especially a small quantity taken at the first meal, assists much in subduing it; but a specific plan of treatment may also be adopted with success, having the twofold object,

to alter the secretions and to relieve the bowels. For this purpose mercury will be indispensable, and the particular preparation, and the nature of the aperient, must be varied according to the constitution of the patient. A bitter tonic is always afterwards required to complete the recovery; I have always seen the simple infusion of the seeds of the strychnus (*nux vomica*) especially beneficial.

Heart disturbance (intermitting pulse, palpitation) is, to the patient, perhaps, amongst the most alarming symptoms resulting from indigestion; the heart is described as turning over, and its action for an instant wholly suspended; it comes on without any warning, and occurs at all parts of the day; palpitations most frequently come on in the night, when the patient wakes (about two or three o'clock in the morning, just as the last portions of food are passing out of the stomach) in terror and agitation; this is so distressing that his hours of repose actually become a period of dread to him; and it is difficult to persuade him that he is not the subject of some structural disease.

It is, notwithstanding, desirable to relieve the

patient's mind, if possible, from his misapprehension, as the influence of too anxious watching of the symptoms may increase the disturbance: the true state may be fairly explained, since there is a real exciting cause, beyond mere nervous irritation, in the presence of flatulence in the stomach and colon, which forcing up the diaphragm interferes with the free action of the heart. Counter-irritants over the stomach are more immediately effective in giving relief, and an altered diet is absolutely necessary. The most distressing case I ever saw was one in which the palpitation lasted for three days without intermission, attended with profuse perspiration, and the most fearful restlessness. It was at length relieved by aperients, combined with antispasmodics. Opiates were of no avail. This patient was injudicious in the extreme in regard to diet; he, however, perfectly recovered.

The palpitations which are present in hysterical females are of a different kind: and there is also an instance of palpitation not the result of indigestion, although it is frequently mistaken for such, to be met with in cases of young men in the com-

mencement of their medical studies. In the full vigour of manly youth, it is hardly likely that so many should be found subject to derangement of the digestive organs. The disturbing cause is simply nervous excitement, which is the result of a novel and distressing class of objects, presented to their continual observation; a sort of terror at the first revelation of the sufferings, to which the human frame is subject, fills the imagination and disturbs the nervous system. No treatment will be successful in these cases until the subjects of these palpitations be removed from the too deeply interesting scenes: the symptoms then vanish rapidly, and the fallacies of their own apprehensions having been once exposed, they gradually become accustomed to the scene of duty.

In all these cases, the diagnosis is corroborated by auscultation giving no physical signs.

A morbid state of the nervous system often exercises great influence over the organs of digestion. The stomach being so largely supplied from the brain with nervous energy, this influence is obviously to be looked for, and it is also well understood that the stomach, by reflex action, in-

fluences the brain, and produces headache, pain over the forehead, and loss of vision.

The effect of a sudden revulsion of the feelings on the various bodily functions, especially on those of digestion, is familiar to all; in these the cause of the temporary disturbance is obvious; but many are apt to overlook the influence which the daily cares and anxieties of life, especially if sustained too long without relief or intermission, are likely to exert over the functions of the digestive organs, and through them on the whole system. When, as in some professions or businesses, strong efforts of the intellect are combined with anxiety, and perhaps with bodily fatigue, the digestion suffers to a degree so severe that the symptoms induced bear many of the characters of organic disease, not only of the heart, but of the other viscera. Medical treatment is obviously needed, but can never be completely effectual until repose and respite from anxiety be obtained. There is, in fact, only a certain amount of vital energy supplied to each individual, and if the brain be called upon to do a larger amount of duty than is provided for, it is manifest that it must be

done at the expense of the energy intended to be distributed over all the organs of the body; thus exhaustion and unduly performed bodily functions succeed the over-working of the brain. Mental anxiety, keeping the brain still active, prevents that renovation, which repose might otherwise afford in the intervals of intellectual labour. Excessive bodily fatigue, on the other hand, draws off to the voluntary muscles a larger proportion of energy than is due to them, to the manifest temporary deprivation of the brain and internal organs. Hence, therefore, the equilibrium can only be restored (not by demand on those organs which have been already called upon, but) by repose of the organs which have been over-worked. Where the dyspeptic symptoms have attained a severe form, temporary cessation from labour should be accompanied with change of scene, which has the double advantage of presenting a new train of objects and associations, and of furnishing an atmosphere rendered pure and invigorating by the effects of vegetable life supplying the oxygen, which is defective in the carbonised atmosphere of cities.

CHAPTER II.

ON THE COLON.

I HAVE frequently, in the course of these observations, alluded to the colon as a most important organ, the healthy or unhealthy condition of which exercises a prevailing influence over the state of the whole digestive system. I have already referred to the movements and contractions of the stomach, which are important in the due function of that organ; a series of similar contractions and movements takes place continually throughout the whole canal, of which the colon is the remoter portion, and all these movements have an onward tendency, and are most intimately connected with each other; if there be a failure, therefore, in the due contractions of the stomach, it is reasonable to look for the cause in a suspension of action further on in the series, and so on. It is plain, that if the functions of the remoter portion of the canal be unduly per-

formed, the progress must consequently be impeded throughout. That failure in one part of the canal deranges the whole course, is shown in strangulation of the bowel, in which not only is the downward movement stopped, but the series of contractions becomes inverted from that point; it appears reasonable, therefore, to refer the imperfect action of the various links of the chain to some further point, on which all their movements are so closely dependent. By a review of the peculiar course and functions of the colon, many reasons may become apparent, why derangement in that part may be the primary cause of general disturbance in the greater number of dyspeptic cases.

The accumulation to which the colon is so liable, deranges its proper movements, obstructs the transmission of the contents in due succession, and causes a state of immense distension. Again, the peculiar course of the colon carries it into the immediate vicinity of many important organs; we therefore perceive, that, when in a distended state, it is not only liable to impede the proper movements of the alimentary canal at the very commencement of the series, but it is likely to interfere

with other viscera, and to encroach upon them to a degree wholly inconsistent with the performance of their healthy functions.

There appears also in the duties which belong to the colon some yet unexplained, though obviously important, object. When we review the wonderful peculiarities of its construction, the beautifully contrived and complicated valve through which the contents of the small intestines are passed into it, — the large repertory, out of the current of the stream, — the ascent of the contents from this repertory contrary to gravity, and their transit all across the body when they might, apparently to us, have been passed at once into the lowest portion of the bowel, — we cannot doubt that some important point in the economy of the system has been the object of so remarkable an apparatus; we can hardly regard it as a mere receptacle, or fail to believe that the matters contained in it undergo some important change beyond the denser form which they acquire in the course of their transit. As the blood from the colon is returned to the vena portæ, it is evident that it carries with it material for the formation of bile; and, as the colon is thus

concerned in the duty of supplying the liver with blood equally with the other floating viscera, there is strong presumption against the view which considers the contents of the bowel as being merely in an excrementitious state when received into it.

However obscure may be our speculations as to the complete use of this organ, we are able to reason from its peculiar construction, in being furnished with cells, as well as from the fact that the influence of gravity retards, at one part, the transmission of its contents, that it is intended always to contain, for some time at least, some portion of the matter received into it: all attempts, therefore, to keep it habitually empty, or nearly so, must be as contrary to reason and the designed use of the organ as is the opposite extreme of permitting it by neglect to become overloaded and distended. I conceive that it is particularly in the distended state of the bowel, and when its proper functions are interfered with, or suspended, that we must regard it as the source of numerous evils. I will venture to repeat now the remark, that the want of those contractions, which

are proper to the colon in its healthy state, may be the first cause of general delay throughout the whole canal. The long retention of the contents, passing, as they must do in time, into a state of decomposition, cannot fail to exert a deleterious influence over all the secretions in the body. However adapted all the viscera may be to keep within their cavities the various ingesta and secretions which they are intended to contain, we are quite aware that many substances when taken into the system find in some way a most rapid course to the surface of the body, and, by the secretions or excretions, make their presence evident to the senses. Examples are familiar: garlic applied to the wrists is almost immediately perceptible in the breath, and sulphur taken internally soon exhales from the skin. Although it is conjectured that the absorption is less active in the colon than in the smaller intestines, yet we cannot doubt that there is a sufficient power of absorption to allow the blood to be deteriorated or poisoned by the presence of fluids constantly taken up from a mass of the grosser parts of food when in a state of decomposition. The subject is any thing but inviting,

but it is one of the greatest importance to insist upon, since there are many who permit the accumulation to proceed for most unreasonable periods, being quite unaware that numerous dyspeptic sufferings, and still more, diseases of formidable character, are likely to be induced by such neglect.

The construction of the colon has evidently provided for a certain degree of accumulation, and, reasoning from the preservative contrivances evident throughout the system, we may believe that some provision has been made to counteract the danger of excess in that accumulation, and all the baneful consequences which attend it; still, supposing that nature is thus bountiful in protective supervision, we are furnished with no excuse to neglect scientific reasoning as to the best means to assist in averting the error, nor are individuals exempt from those continual duties, in regard to this important point in the preservation of health, which reason and experience make evident.

To review all the diseases of the colon would be to recapitulate nearly the whole train of dyspeptic symptoms: whilst referring to the means of

immediate relief in nearly all the forms of dyspepsia, I have remarked that the use of aperients, by acting freely on the colon, can alone reach the final cause: it is of course highly desirable to select such medicines as act peculiarly on that organ. When the colon is obviously the point of derangement and the seat of pain, and the more prominent symptoms are not those of mere dyspeptic character, accumulation to a very considerable amount, accompanied with a large evolvment of gas generally exists: this constitutes the complaint, especially called colic, which is a frequent cause of very severe suffering. Collections in the cæcum are not felt to be so distressing as regards dyspeptic symptoms, as when they take place in the arch: the cæcum is so bound down by membrane, and so preserved in its natural position, and it is also so supported from the effects of gravity by lying in the side of the pelvis, that it is only from distension that pain is experienced in this part.

The cæcum, being out of the current, appears to be the natural depôt where collections to some extent are intended always to exist. There may be especial reason for this delay, for, though we

are unacquainted with the peculiar function of the appendix, it is more than probable that some change takes place at this point for which delay is necessary. The cæcum is also situated more out of the reach of other organs, and less likely, by its state of distension, to interfere with them. The mere collection, therefore, of matters in the cæcum is not necessarily a cause of colic, unless, by a too long continuance of the contents, decomposition or fermentation take place, and gas be evolved, which is pent up by some accumulation further on in the canal. The symptoms of colic and mode of treatment are too familiar to require particular notice. There is little difficulty in distinguishing it from peritonitis. I will only remark, that I would rather deprecate the use of opiates, but seek the immediate relief from the most stimulating and fullest lavements.

The kidneys and the bladder, from juxtaposition, are often much irritated during attacks of colic; but as these affections are but secondary, they subside on relief being obtained from the colon. A long list might be presented of distressing symptoms, the cause of which is traceable to a

disordered state of the colon, and all of which are in their turn, sometimes supposed to be either primary diseases, or symptoms of serious disorders. Epilepsy, loss of power approaching to paraplegia, pains simulating rheumatism, cramps and spasms in the limbs, and many others. All these may occur in consequence of nervous irritation set up in the colon, and communicated to the brain and spinal marrow. A single attack of epilepsy is sometimes induced by this irritation in younger persons, who are not afterwards subjected to it; and in others who are habitually epileptic, irritation of the canal, more particularly of the colon, multiplies the number and increases the severity of the attacks.

It is obviously not intended by nature that collections should take place in the arch of the colon in the same way that they do in the cæcum; it is not supported in its position as the cæcum is, and therefore its weight, when fully loaded, conveys an uneasy sensation: this is described by patients as of a dragging kind, and as if there were a separation between the stomach and bowels; thus, while the cæcum, which is intended to act as a

depôt, retains its contents without uneasy sensations, the arch immediately gives notice by pain of the presence of accumulation, for which it was apparently not constructed. There is also experienced a pain beneath the left shoulder blade, which is relieved by pressure, which I should refer to the external respiratory nerves through the medium of the stomach. As the colon extends itself across the body in the vicinity of the stomach, collections in the arch interfere mechanically with it, and we find all those true dyspeptic symptoms which we have noticed as coming on when the stomach is empty and in a disordered state. It is chiefly when the arch of the colon becomes obstructed and the functions deranged, and continuance of the disordered function has given rise to pyrosis and many other forms of dyspepsia, that those difficult cases arise which, without due caution, may be mistaken for structural disease : the large and continued amount of pain, the variety of distressing sensations, similar to many which accompany organic disease, and the fulness in the abdomen, which is distinguishable even to the patient, often lead to a false impression,

if not in the physician, at least in the mind of the patient. In these cases it is sometimes difficult to make it understood that so much suffering and disturbance can proceed solely from a cause which appears to be so inadequate to the result; and it is also in consequence difficult to persuade the patient to follow up a line of treatment which requires some degree of resolution and perseverance. It too often happens that rather than pursue such a course, the subjects of this class of disorders fall into the habits of confirmed invalids, abandoning exertion, and accepting only so much of the enjoyments of life as they can enter into without increasing their discomforts, and a corresponding diet which they can use with the least degree of pain. Some sacrifices of health, especially lamentable, because unnecessary, have been the result of this trusting to self-judgment. The following may appear more like a history, cunningly devised for the admonition and instruction both of physician and patient, than what it really is, the plain statement of a case which I once had to attend.

On my first residing in the district whence I

have lately removed, one of my first patients was a married lady, who had long been a confirmed invalid. I am not in possession of the exact history of her first illness, but it began very shortly after her marriage, and more than ten years before I first attended her. She had at first consulted many practitioners, and been treated for various disorders, especially for structural disease of the stomach and bowels; she had, however, for many years previous to my seeing her, abandoned experiments, and had subsided into the state in which I found her. She remained nearly always in a recumbent position, and was unable to walk or even to hold herself quite upright. It gave her pain to attempt to straighten the limbs, and therefore her sofa was contrived so as to support her with the knees partly drawn up. She was very pallid and thin, and complained of great pain at the pit of the stomach after taking food, in consequence of which she had gradually reduced the quantity until her habitual support consisted in a very small daily portion of light pudding or milk and water with a rusk soaked in it. Her bowels were always extremely confined. She suffered

very frequently from the pouring off of clear acid water in large quantities from the mouth without vomiting: she also suffered occasionally from very severe pain in the lower part of the abdomen. She had quite made up her mind that she understood the pathology of her own case, and explained it in her own phraseology: she said that there was a small hole between the stomach and the large bowel, through which she felt all her food squeeze gradually, or trickle down into the bowel; the acid water in her mouth she called secretion from her glands, and the pain in her abdomen, cramp in her bladder; she was quite certain that any active aperient would cause her instant death; and she would never venture on more than a single grain of calomel now and then, or a tea-spoonful of manufactured Cheltenham salts. On examination there was always a large accumulation to be felt in the colon, and although I was satisfied of the state of that organ being the cause of her derangement, and tried to explain my views to her, I could neither succeed in changing the course of her belief, nor in persuading her to submit to any treatment likely to relieve her. A very small

blister at the pit of the stomach, and a round of very trivial remedies, were the utmost she would allow me to prescribe. It is, perhaps, the most remarkable part of this story, that for ten years she continued to send for me at very short intervals, although I was never permitted to afford her any effectual relief, and always steadily risked the loss of her confidence, rather than indulge her own notion of her formidable state of disease. She was carried during the whole time from her bed to her sofa in her bent position, and on very fine sunshiny summer days took a short drive, the carriage filled with cushions, and going at a gentle pace, and only on the smoothest roads. At length on one occasion, when her pain was more severe than usual, approaching to an accession of colic, I succeeded in persuading her to let me order her a lavement ; having obtained this unusual concession, I took care to order it stimulating and large in quantity : the result proved that the accumulation in the colon had been enormous ; after this relief she improved so much as to be able to walk about her room, but she was still averse to follow up any reasonable plan of treatment.

The evidence of one experiment could not upset the fixed idea of twenty years. She *knew* it was of no use, nor, in one sense, might a restoration to health have added to her happiness: she had called herself a wonder, and her sofa was always the centre of attraction for admiring friends, who regarded her as a model of suffering resignation: she had a kind, gentle word and look for every body, and would have met with many trials in exchanging these quiet amiable consolations for active duties. At any rate she resumed her sofa and her invalid habits until she was attacked, about a year afterwards, by peritoneal inflammation, the result of accidental exposure to cold. She now resisted all remedial treatment more strongly than ever, being certain that her suffering was only the sequel to her *old complaint*; a few leeches were all that she would submit to, and she died within the week. A careful examination was made by Mr. R. Craven in my presence, according to the desire which she had frequently expressed. There was no evidence of structural disease in any of the viscera,* nor lesion of any kind of long standing. There was evidence of acute peritoneal inflamma-

tion, slight effusion in the cavity of the peritoneum, and recent lymph adhering to the convolutions of the intestines. The colon contained a very large quantity of feculent matter, and was greatly distended. I do not detail this case as any thing wonderful or unusual. It is, in fact, the history of hundreds, and owes the chief of its interest to the *dénouement* in the form of a *post-mortem* examination, which is not often afforded in such cases. There is also a singularly appropriate moral, in that, after having imagined herself to have been so long kept alive by medical treatment, she died at last from the absence of the commonest assistance, which was offered to her, but which she had not faith enough to accept. In regard to the colon, it is obvious that from its state of habitual distension a long time and very judicious management would have been required to restore it to a healthy condition. The long absence of any thing like a crisis, with such extraordinary accumulation, can only be attributed to her excessive abstinence and to her extremely quiet habits and her removal from every kind of excitement.

Having detailed this case in exemplification of

the mischief arising from want of aperient treatment, I must guard myself from the possible imputation of being the advocate of a continual indiscriminate use of purgative medicines. Not only is such a habit injurious to the healthy tone of the digestive organs, but in reference to the colon it may be persevered in, while the actual cause of irritation, which is intended to be removed, may remain unapproached. The peculiar construction of the colon admits of a passage along the course of a channel, the sides of which consist of so many loaded cells; thus though there is action of the bowels, the disturbing cause may still remain, and can only be fully dislodged by a change of aperient, and other remedies. It is the property of certain medicines to act especially on certain parts of the intestinal canal, and a too frequent use of these may allow accumulation in parts which they do not directly affect. It is a most useful hint to those who are compelled to the use of frequent aperient remedies, that the same medicine which has been found satisfactory, and has only lost its effect by frequent repetition, will regain its efficacy if the period of the day be

changed, thus presenting it to the stomach and bowels when the organs are in a different state of rest or repletion; and this change is perhaps better than increasing the dose, or altering the medicine to any thing more active.

I would also not be supposed to affirm that the most efficacious course of medicine could alone restore the tone of the digestive organs after they have become thoroughly deranged. A variety of sanatory rules should accompany the treatment, according to the peculiarities of the case; and it frequently happens that a change of air and scene is indispensable to the recovery, after every other wise and prudent measure has been adopted.

CHAPTER III.

ON THE COMPARATIVE SYMPTOMS IN STRUCTURAL AND
FUNCTIONAL DISEASE OF THE STOMACH AND ALI-
MENTARY CANAL.

MOST of the following remarks have been scattered throughout the previous pages, but as a comparative view of some of the symptoms concisely given may be useful, I shall notice them according to the order in which it is usual to take them when examining a case ; thus, begin with the external appearances as the earliest guide on the first view of a patient, then proceed with the internal symptoms ; and, as is usual, having the judgment directed by such evidence, conclude with the examination by touch.

Complexion, and general appearance.—It is very difficult to describe precisely the peculiar hue of the complexion which belongs exclusively to cancerous disease, at least so as to make it at once recognisable by those who are unaccustomed to

notice it. It is, notwithstanding, perhaps, one of the most distinguishing marks of the disease. It is, of course, modified by the natural complexion of each individual; but it consists in a certain dingy, sallow, exsanguinous, yet opaque, appearance; it is unlike the yellow tint of jaundice, or the opacity seen in some states of heart disease. The eye is sunken, the adnata pearly; there is a peculiar cast of countenance, expressive more of care and depression, than of dissatisfaction, and more of deep thought, than of peevishness.

In functional disease the hue endeavoured to be described, is never seen: it is only in pyrosis that there is any approach to it, when there is often much change in the natural colour: the countenance in pyrosis has a pinched and dissatisfied expression rather than one of thought and anxiety.

Emaciation and loss of strength.—In structural disease the emaciation varies according to the situation of the diseased deposit. In the strictured form of disease both of the cardia and œsophagus, it takes place to an extent not seen in any other kind of disease; when the diseased deposit is in any other situation, whether within or external to the

stomach, there is still immense wasting of the flesh, though not in the same extreme degree. Loss of strength in stricture of the cardia and œsophagus is not experienced in equal proportion to the emaciation, for in this particular situation, it is not unusual for patients to refer to their vigorous sensations as an argument that their cure ought to be within the reach of art. On the contrary, when disease is within or external to the stomach, there is an extraordinary prostration of strength, exceeding the severity of the other symptoms, and due, of course, to the number of viscera which are interfered with.

In the functional disease slight loss of flesh may accrue, but the strength rallies immediately, on intermission of the more distressing symptoms.

Pain. — In the early period of structural disease pain is not in all cases present, the absence of pain, accompanied with other well-known symptoms, leads to the presumption that a disorganising process is being carried forward insidiously: when pain is present, it is at the pit of the stomach, of a lancinating grinding kind, and usually confined to a particular spot. In the strictured form, pain

is more acute and more defined than in the areolar or colloid.

The functional disease is peculiarly marked by pain, which is more diffused and intermits, coming on at intervals according to the stage of digestion. The suffering is never of the acute lancinating character, and yields in a temporary way to the use of alkalies.

Vomiting. — Vomiting is an important symptom in structural disease; it is to be found in some stage of the complaint, though not invariably present at all times. In the later stages, and as the disease extends itself, the imperfect action of the muscular coat converts the vomiting into a mere act of regurgitation.

In the functional disorder, vomiting is only present occasionally, except in pyrosis, and is plainly set up by the presence of food on which digestion has been imperfectly performed, or of vitiated secretion, and does not return as a constant symptom: there are sometimes regurgitations of undigested food shortly after eating, but they do not form any prominent symptom, and soon subside or yield to alkalies.

The fluid vomited.—The dark-coloured fluid approaching nearly to the character of venous blood is a peculiar mark to distinguish structural disease from mere functional derangement of the digestive organs. In the latter complaints it is never present.

Constipation.—In structural disease, constipation remains always present as a constant symptom. In the later stages, and especially when the disease spreads to the colon, violent bowel attacks occasionally supervene, accompanied or not with hæmorrhage. The seat of the collection is the cæcum.

In functional disease, costiveness is a frequent symptom ; but the relief obtained by aperients and purgatives is not of such mere transient benefit as in the structural. The most distressing dyspeptic symptoms arise from collections in the arch of the colon.

The tongue.—In the structural disease, almost without exception, the tongue is clean, and continues so until an advanced period: the aphthous state of the tongue is usually the attendant on the later stages ; it is merely to be referred to failure of power, as in other chronic diseases.

In the functional disease the tongue is generally

foul and covered with fur: the aphthæ are of course not present; although there is often a slight ulcerated place here and there on the tongue, quite different from aphthæ, and to be referred to the acid state of the stomach.

Flatulence is a symptom attending both the structural and the functional diseases of the stomach. In the structural, it is always fetid, and almost constantly rising.

In the functional, it gives great distress by distension, and relief is felt by its escape; it is not of the same offensive character.

Of the appetite.—Though digestion is imperfectly performed in both diseases, in structural disease, as a general rule, the patient finds that he is only able to take farinaceous and vegetable food.

In the functional, the patient generally finds himself better with an animal diet.

Examination by touch.—Examination over the abdomen may be made freely by touch in the structural disease, without causing pain to the patient, except when pressure is made over the precise seat of the carcinomatous deposit. The pain which results from such pressure is severe

and lasting, but it is confined to that particular spot. When the disease is situated within the stomach, it is described as resembling the pain which precedes vomiting. The liver is not sensible to pain on pressure unless the tubera be raised above the convex surface, and are vascular. When the tubera are thus elevated, they can be detected through the parietes when the patient is thin.

In the functional disease, there are times when pressure any where over the stomach and upper part of the abdomen produces pain. The patient feels a dread of being touched; as the pain felt on pressure arises from the inflated state of the stomach and bowels, percussion carefully made will give evidence of the nature of the case.

Progress and Development of the Disease. — The structural disease comes on so gradually and insidiously, that the patient is often unable to give a history of the very commencement of his illness; and cases have occurred in which a considerable state of disorganisation has taken place before the attention of the patient has been directed to his condition by any train of tangible symptoms.

In functional disease symptoms of the derangement of the digestive organs force themselves very early on the feelings and attention of the patient, and the magnitude of the suffering seems to exceed the actual amount of disease, and the patient presses his symptoms earnestly, and dwells minutely on the circumstances of his case.

CHAPTER IV.

CONCLUDING REMARKS.

ON a comparison of the two forms of disease, structural and functional, the practical result which is chiefly to be desired, is the capability to decide at what particular period the treatment should cease to be directed towards a cure ; at what time energetic treatment, especially in the form of purgatives, should be desisted from, and protective and palliative, having in view only to procure comfort and avoid reducing the strength, should be resorted to. The positive knowledge of the existence of tumour, with a right apprehension of its seat and nature, will afford means for positive decision on this point ; but in most instances, the train of symptoms ought to point out the true state of the case, before any such tangible evidence exists. To review these symptoms, specified and classed according to the various forms and situations of the

disease, would only be to recapitulate nearly all that has preceded; I shall have failed in what I have wished to accomplish, if it do not appear plain that this important conclusion may be inferred from the general history of the disease. I am far from presuming to say, that in some cases the difficulty may not be great, for I have notes of several cases in which so many of the symptoms of structural disease were collected, that for a protracted time it seemed impossible to decide with perfect satisfaction. The recovery of some of these has proved an encouragement to incline to the brighter side when judging of cases involved in unusual obscurity. Nor would I now venture to pronounce, that even these cases of apparent recovery may not hereafter develope structural disease. One of these at this moment enjoys very tolerable health, although twenty years ago she was supposed by a talented physician to be suffering under scirrhus of the pylorus: her symptoms were not to be attributed to hysteria; and the Case of Miss S——, No. 12., is sufficient proof that structural disease may for a long period of years be preceded by severe dyspeptic symptoms,

accompanied by duodenal derangement and constipation.

These lengthened warnings of approaching fatal disease are exceptions to the general course; but in all cases there is a certain amount of notice given, in time generally approaching to two years, which it would be the privilege of art to take advantage of, and meet to the uttermost. Were I to draw out a plan of treatment for such cases, I should advise, after fully and freely relieving the alimentary canal, to enter upon a course of the bichloride of mercury in small doses in sarsaparilla, to be pursued with perseverance for a length of time. Hydro-cyanic acid and opium, according as the symptoms indicate the use of sedatives, are most valuable. Counter-irritants over the stomach should be sedulously persevered in, during the time in which it may be necessary to continue the mercurial course.

When a train of symptoms which have appeared at first to indicate only functional derangement, resist treatment and continue to do so, even before any direct symptom of the severer disease becomes evident, it would be a safe course to adopt the

alterative plan which has been alluded to ; it should be pursued in such instances with great caution, so as not to distress the patient more than the urgency of the case seems to require.

It has been before remarked that structural disease rarely occurs until the period of life arrives when the earlier vigour necessary to the full perfection of the frame is beginning to decline. That the frame should at this time be liable to such errors might from reasoning be anticipated. Observing as we may that the organs of sense lose their perfect adaptation, it is easy to conceive that the tissues of the body may fail in their power to resist the deposit of morbid material. This opinion, coupled with that previously shadowed out, if not established, that local irritation may render membranes more liable to be the seat of such deposit, ought to furnish a useful warning to those who have reached the time when vital energy is no longer in the ascendant : they may thus at least be induced to avoid habits, which may unreasonably distress the internal organs, and to practise so much prudence and moderation as may assist nature to avoid the first tendency towards error.

It is difficult to assign a satisfactory reason for the comparative absence of suffering under the more threatening circumstances of structural disease, while pain, sometimes severe in degree, announces the very earliest failure in the healthy performance of the functions of digestion. There is at least an arrangement to be recognised in this, merciful as well as wise, according to which the remediable disease calls without delay for aid, while that over which art has no restoring power does much of its work silently, sparing the declining frame a long period of distress.

A marked distinction has also been referred to in the expression of the countenance in the two states of the disease, indicating the difference in temperament which generally prevails: the dyspeptic bears the traces of irritability and dissatisfaction, and so connected are these with disordered function, that many who, when well, are mild and patient, and possess tempers highly disciplined, feel this irresistible symptom of their complaint the heaviest part of their affliction. The subject of fatal disease, on the contrary, rarely displays in

the countenance any less amiable expression than that of reflective thoughtful anxiety.

My memory furnishes me with exceptions to this remark, but this general tendency towards a tranquil state of feeling is perhaps the best of mitigations which we can thankfully record as belonging to so intense a state of trial.

We are, indeed, fearfully as well as wonderfully made, and it is difficult without a shudder to contemplate the effects of the derangement of a single organ in our complicated frame. Yet this should not lead us to shrink timidly from investigating the cause and operations of ills which it is permitted us to mitigate and modify, if not to cure. Still less should it hurry us into the opposite error of restless conjectures and anticipations touching the possible work of the Destroyer within us, of needless self-torture by conjuring up imaginary ailments. Rather should the thousand forms of disease, "the Proteus maladies which strike mankind to nothingness not twice alike," be regarded calmly and thoughtfully, as the instruments appointed by inscrutable wisdom for breaking up this tenement of clay, and relieving its celestial

inmate. And, while they thus speak to Faith of a hereafter, they are fraught with useful lessons for our guidance. Patience may find her appropriate exercise in bearing the allotted share of those evils from which none can hope for entire exemption. And the ministering angel, Charity, recognises in every varied form of human suffering but a repeated summons to her labour of love.

LIST OF PLATES.

PLATE I.

CASE, No. 1.

*Simple Carcinoma of the Cardiac Extremity of the
Stomach (Scirrhus Stricture).*

A probe with difficulty passed into the stomach.

The surface ulcerated, and covered with *small*
fungous projections, the abraded surface of small
extent.

The mucous lining of a dark slate colour.

PLATE II.

CASE, No. 2.

*Areolar Carcinoma of the Cardiac Extremity of the
Stomach.*

The section of the coats of the stomach at the
cardiac orifice much thickened, but the orifice

admitting the little finger. The section shows the peculiar mixture of hard and soft material of areolar carcinoma.

The diseased deposit freely ulcerated, and having large fungous projections, is displayed, extending into the cardiac extremity.

PLATE III.

CASE, No. 3.

Simple Carcinoma of the Œsophagus (Scirrhus Stricture).

The stricture is shown, extending for several inches along the œsophagus, commencing about half-way down to the cardiac orifice. The whole length of the strictured part is in a state of superficial ulceration.

The partitioning of the areolar form is shown at one part.

Several small pouches are seen at the lower part of the stricture.

PLATE IV.

CASE, No. 5.

Areolar Carcinoma of the Œsophagus.

The mucous coat over the morbid deposit is shown to have been entirely removed by ulceration. Small tumours of carcinomatous matter may be seen at the inferior margin, the mucous membrane covering them not yet abraded.

Below may be seen the fissures or cracks in the mucous lining of the trachæa. The consequence of the extension of the disease.

PLATE V.

CASE, No. 7.

A Portion of the "Acute Margin" of the Liver in a Case of Carcinomatous Tumour.

The tumour was attached to the larger curvature of the stomach, at its cardiac extremity.

The tubera are shown elevated above the surface, and are vascular on their surfaces.

The section of the liver shows the internal state of these tubera.

The serous covering of the the liver is somewhat thickened, and in some parts opaque.

PLATE VI.

CASE, No. 9.

Areolar, or Alveolar, or Colloid Carcinoma of the Stomach.

Having an extent of several inches along the larger curvature. The irregular forms of the deposit are displayed, the ulceration extending over a large surface.

A portion of the liver containing numerous patches of encephaloid matter, *not* elevated above the surface.

A carcinomatous tumour of mere fibrous character, found with others near the pyloric extremity of the stomach, and close to the spine.

PLATE VII.

CASE, No. 10.

Cancerous Ulcer.

A defined form of deposit of carcinomatous matter, in a state of ulceration, situated in the larger curvature near to the pylorus. The elevated parts are seen slightly ulcerated, and the contained space in a state of sloughy ulceration.

Radicles may be seen extending themselves from the outer circumference of the elevated margin, and losing themselves in the Rugæ.

The section of the coats shows that peculiar partitioned appearance characteristic of areolar (or alveolar) carcinoma.

The septa are seen running in different directions.

PLATE VIII.

CASE, No. 12.

Areolar Carcinoma of the Pylorus.

The stomach is not cut open as far as the pylorus, but the pylorus itself is laid open to show the

course of the ridge of deposit through it. The diseased deposit is seen extending into the pyloric extremity of the stomach about two inches and a half. The elevated surface is slightly ulcerated, but the inner contained space is extensively ulcerated. The liver studded with encephaloid tubera, *not* elevated above the surface.

The gall-bladder is represented full, and enclosing a large gall-stone.

PLATE IX.

CASE, No. 17.

Hypertrophy of the Coats of the Stomach.

The pyloric orifice is seen narrowed.

The muscular and mucous coats hypertrophied.

The muscular coat fleshy and striated, or interlaced.

The mucous coat of a dull red colour more thickened as the pylorus is approached.

PLATE X.

CASE, No. 19.

*Perforation of the Ileum during a Relapse in
Remittent Fever.*

The ulcers are seen of a round form, with their edges elevated, and with a manifest depression in their centres.

The greenish bluish colour of the ulcers is peculiar.

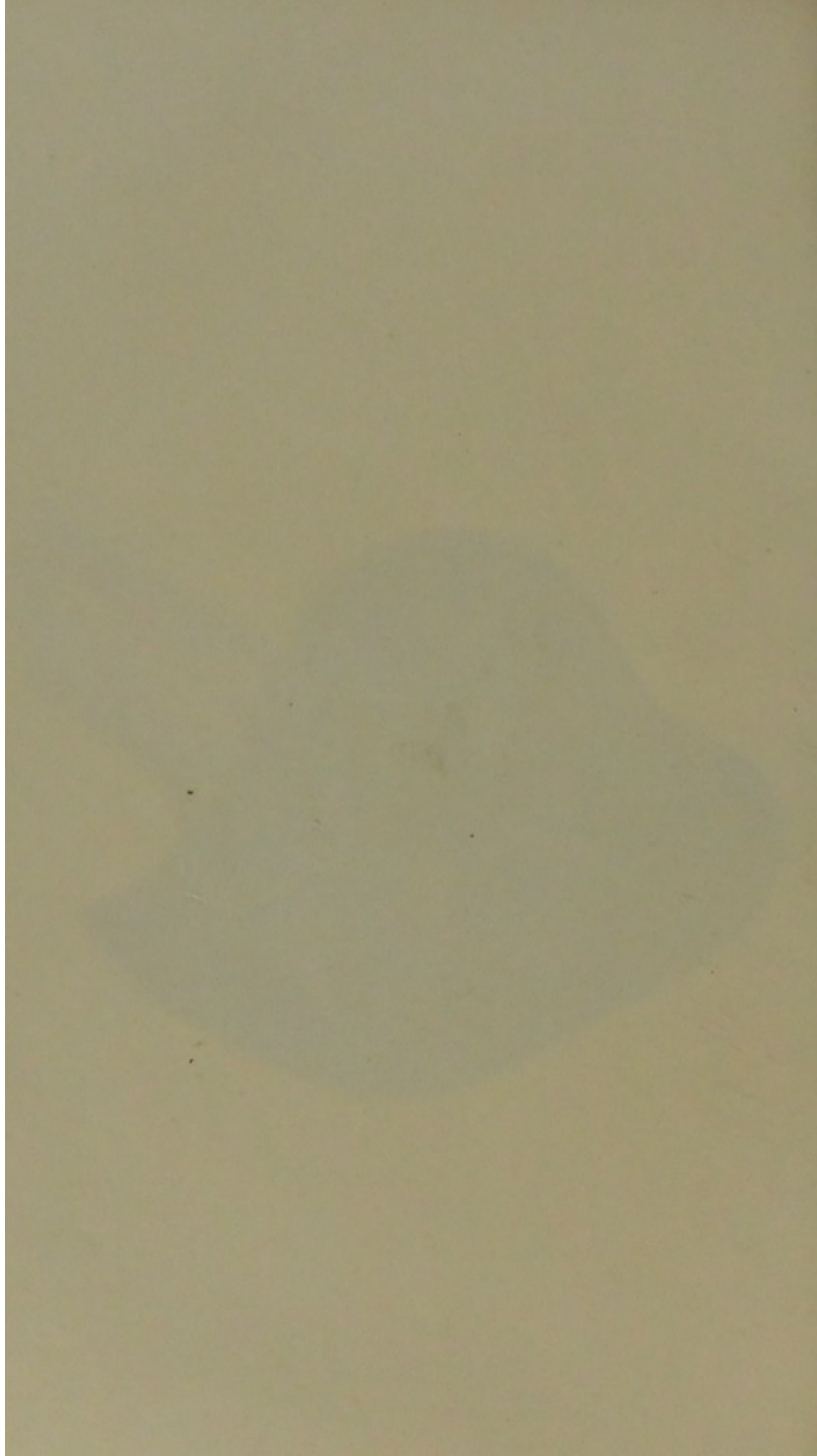
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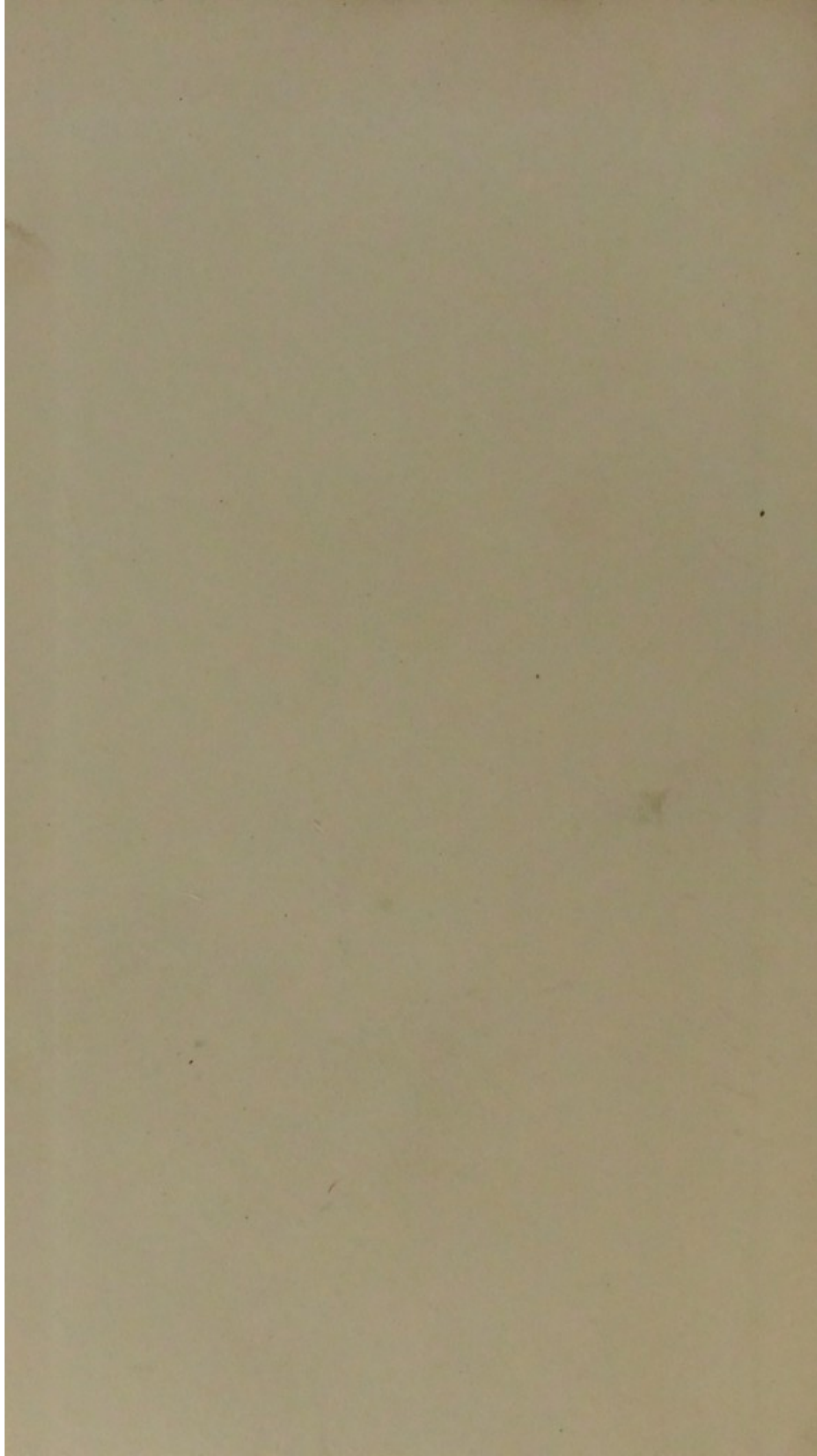
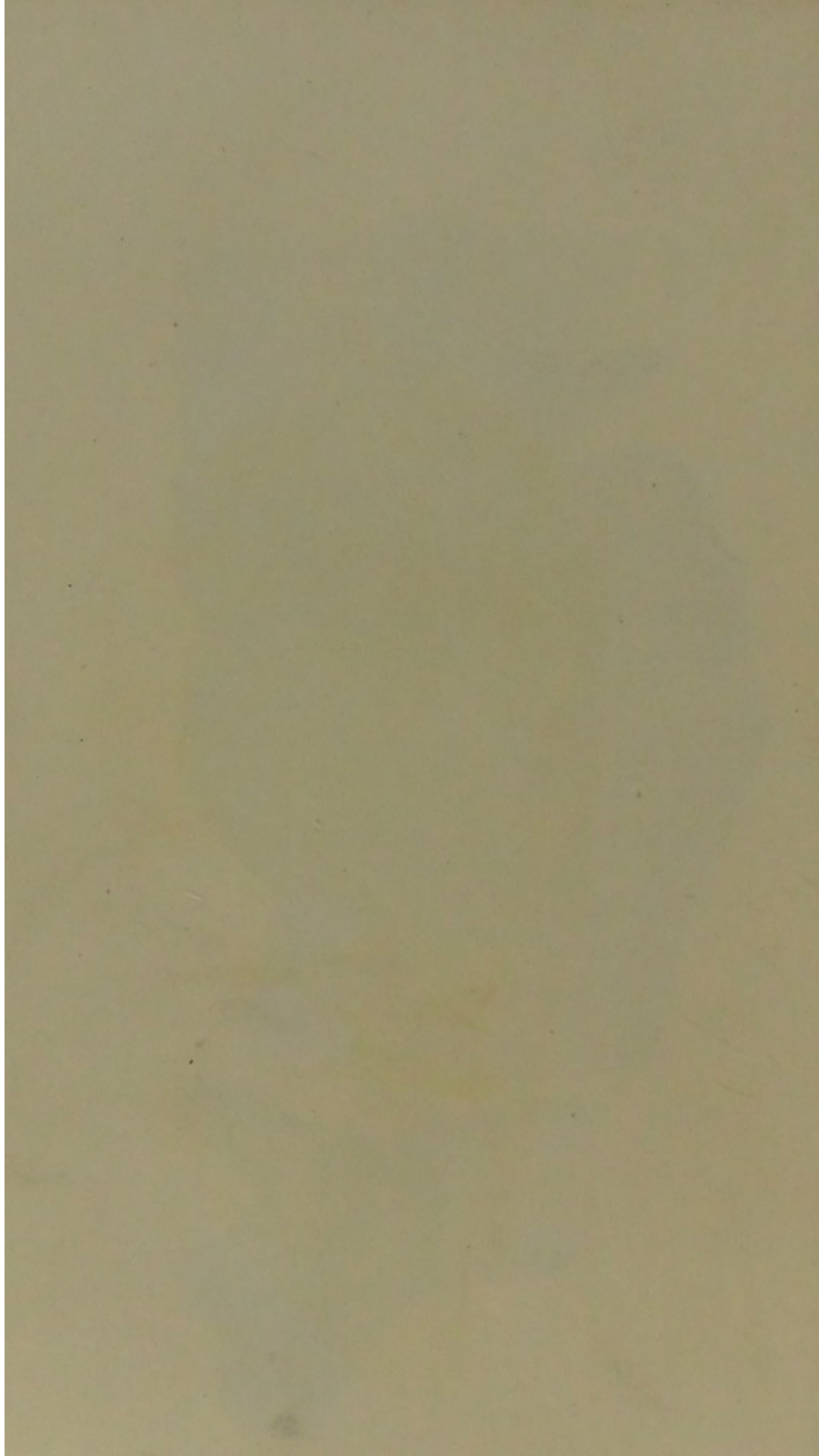
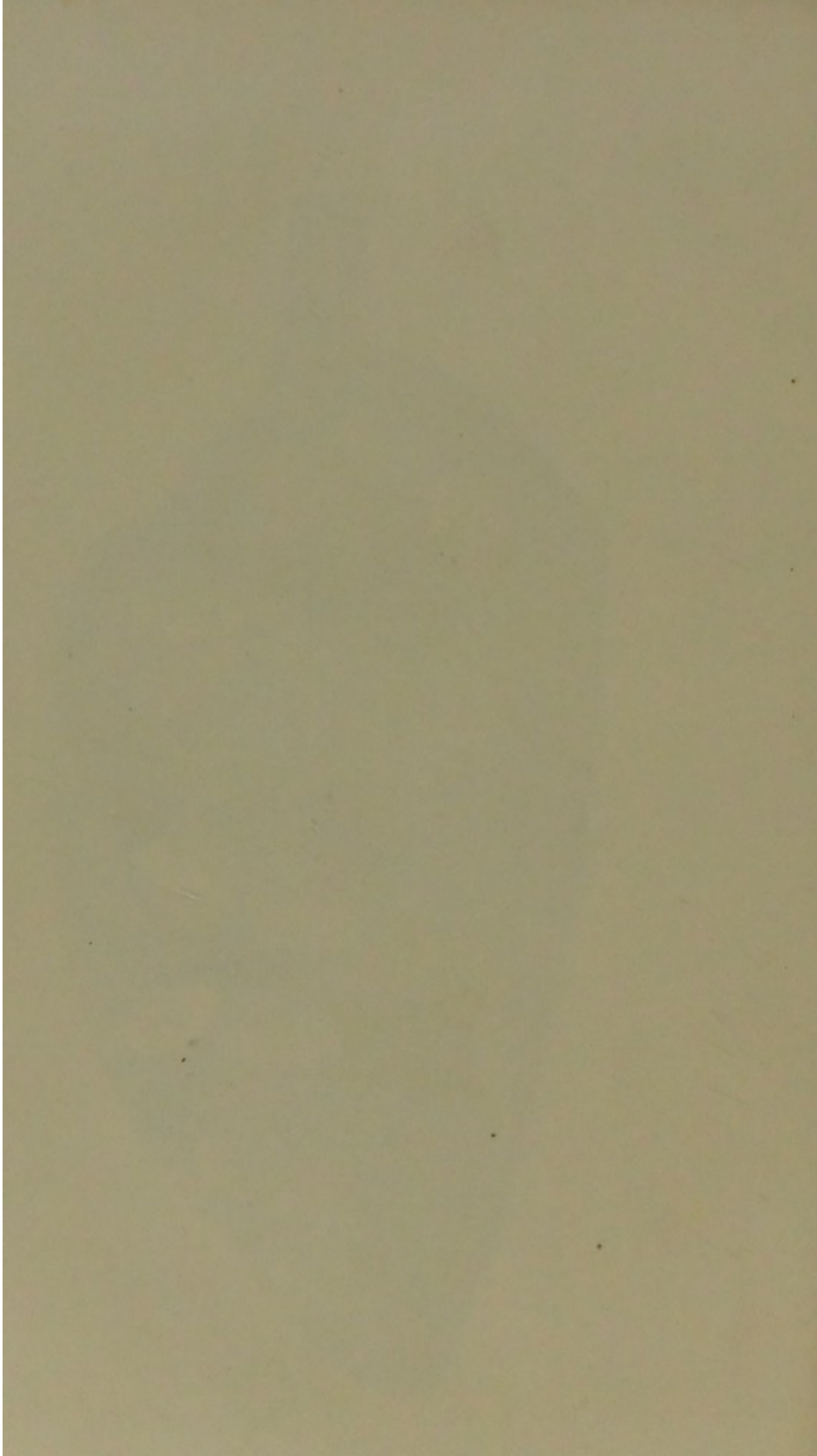


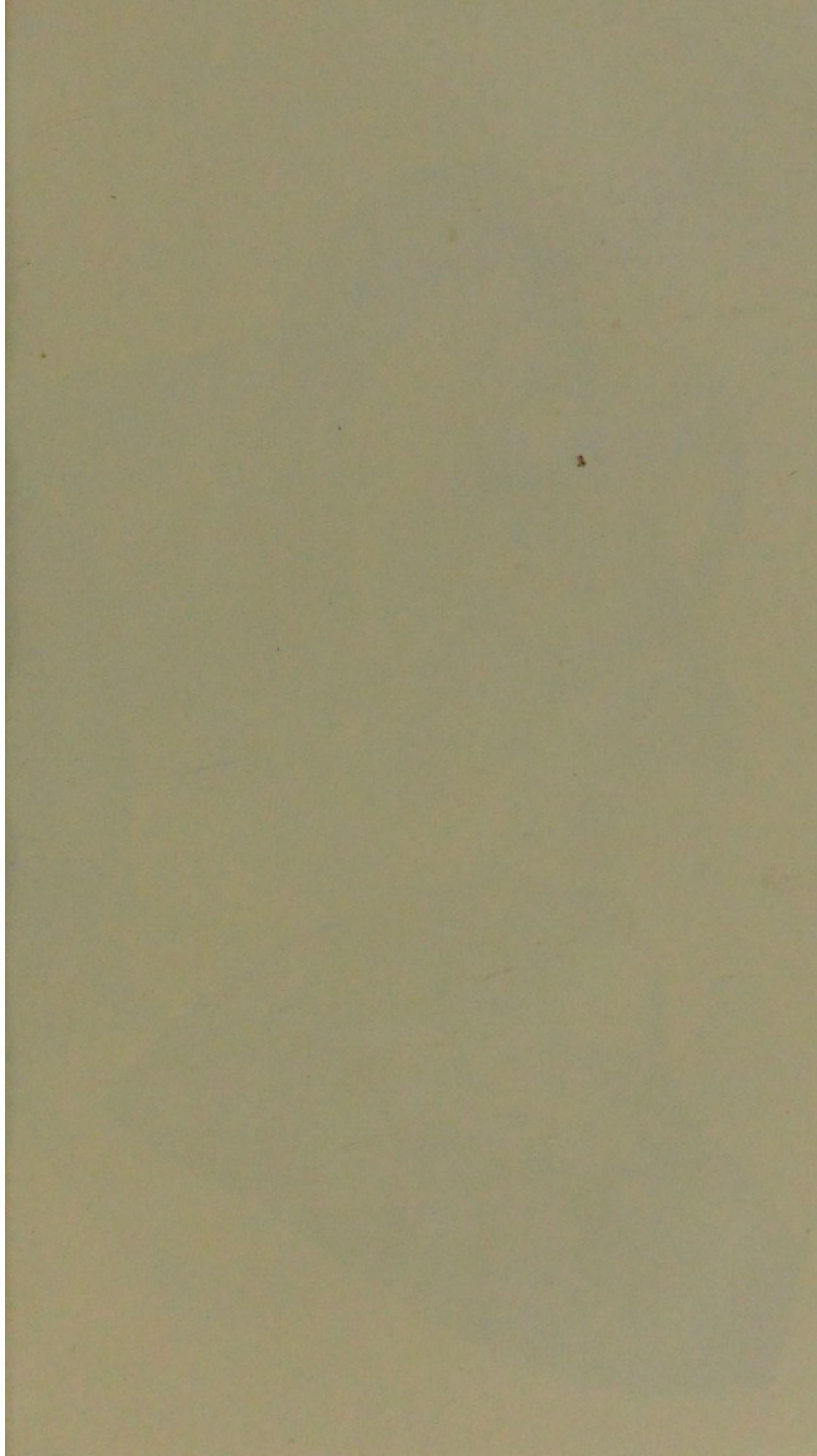
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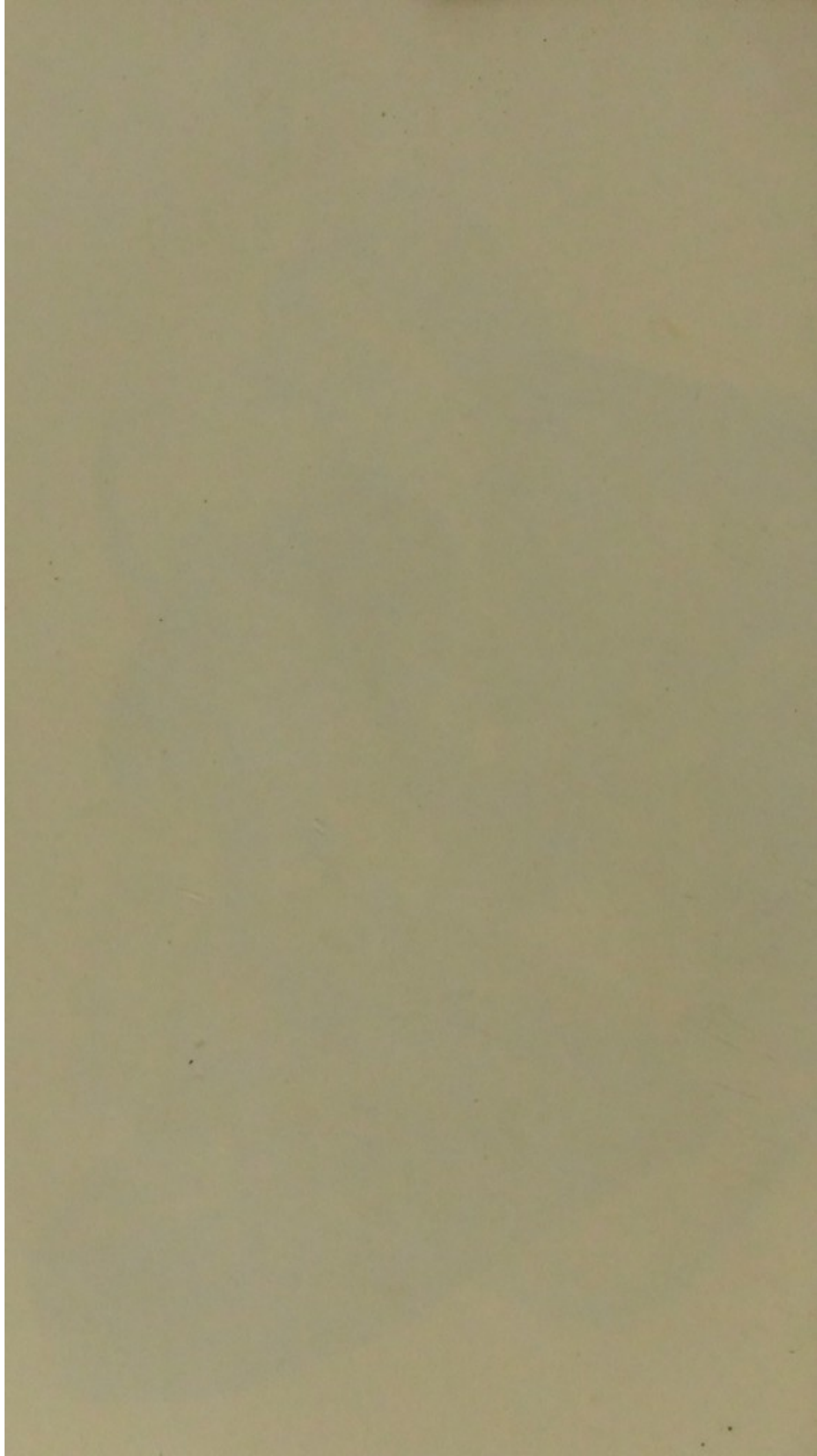
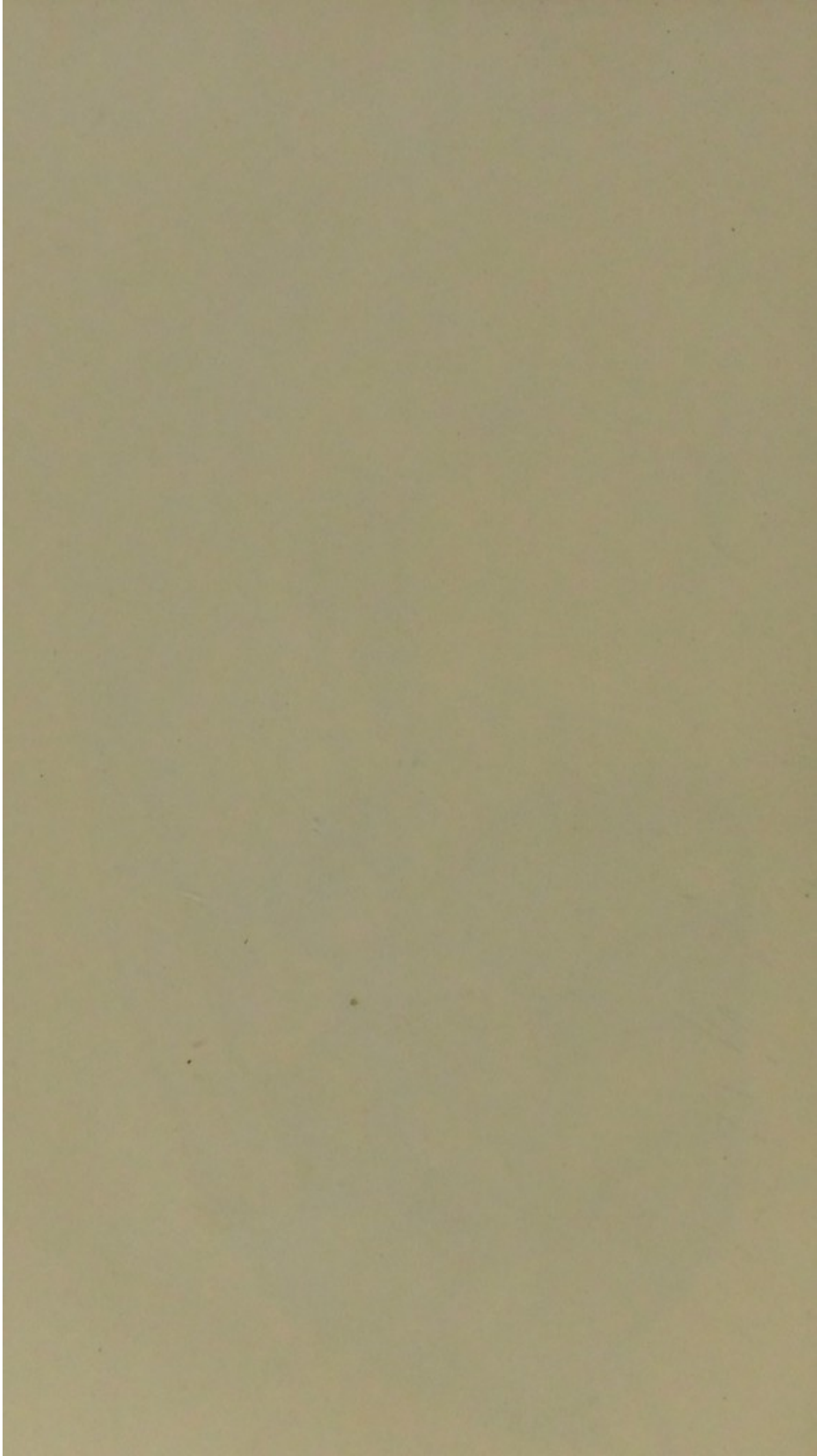


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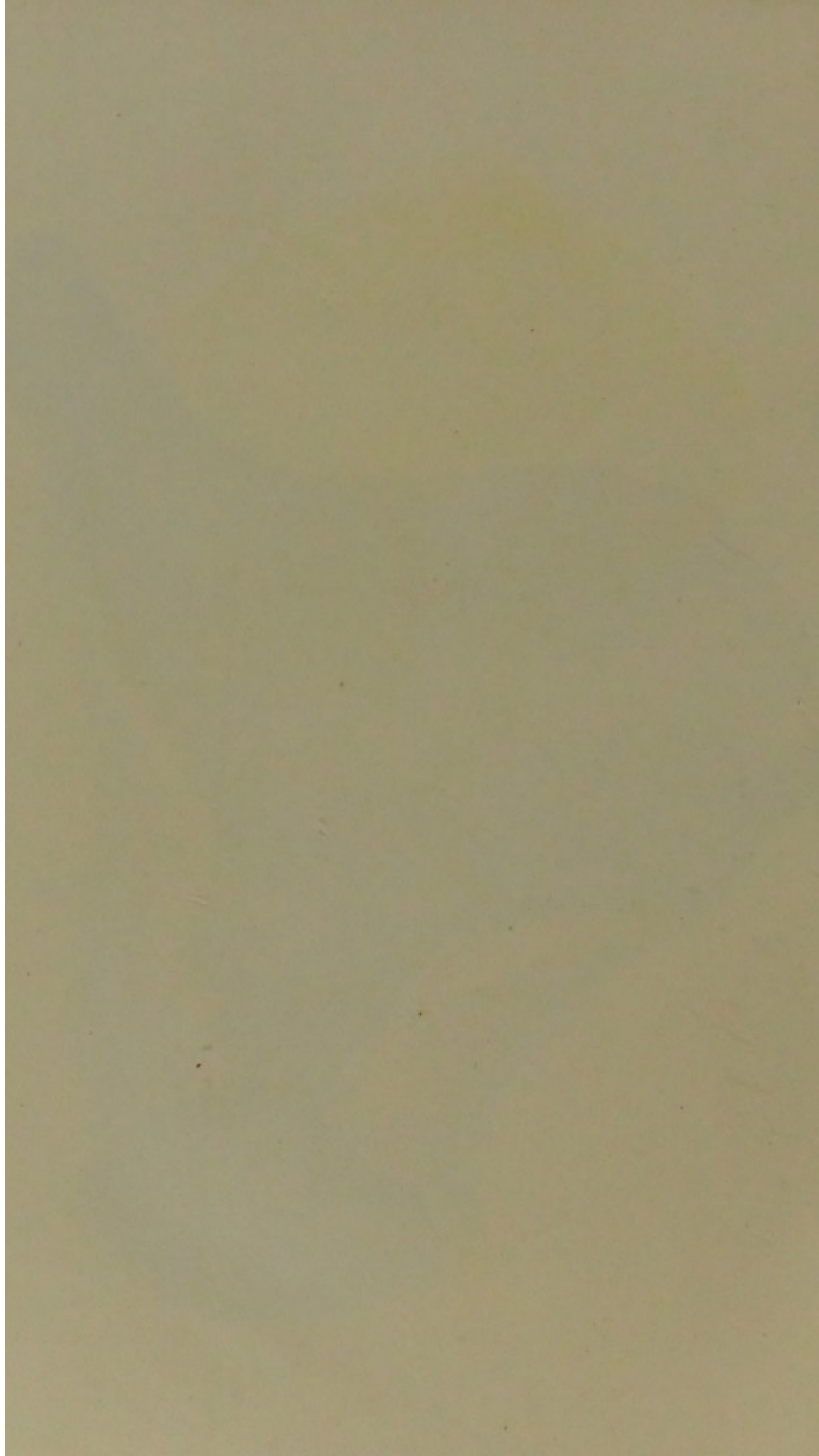






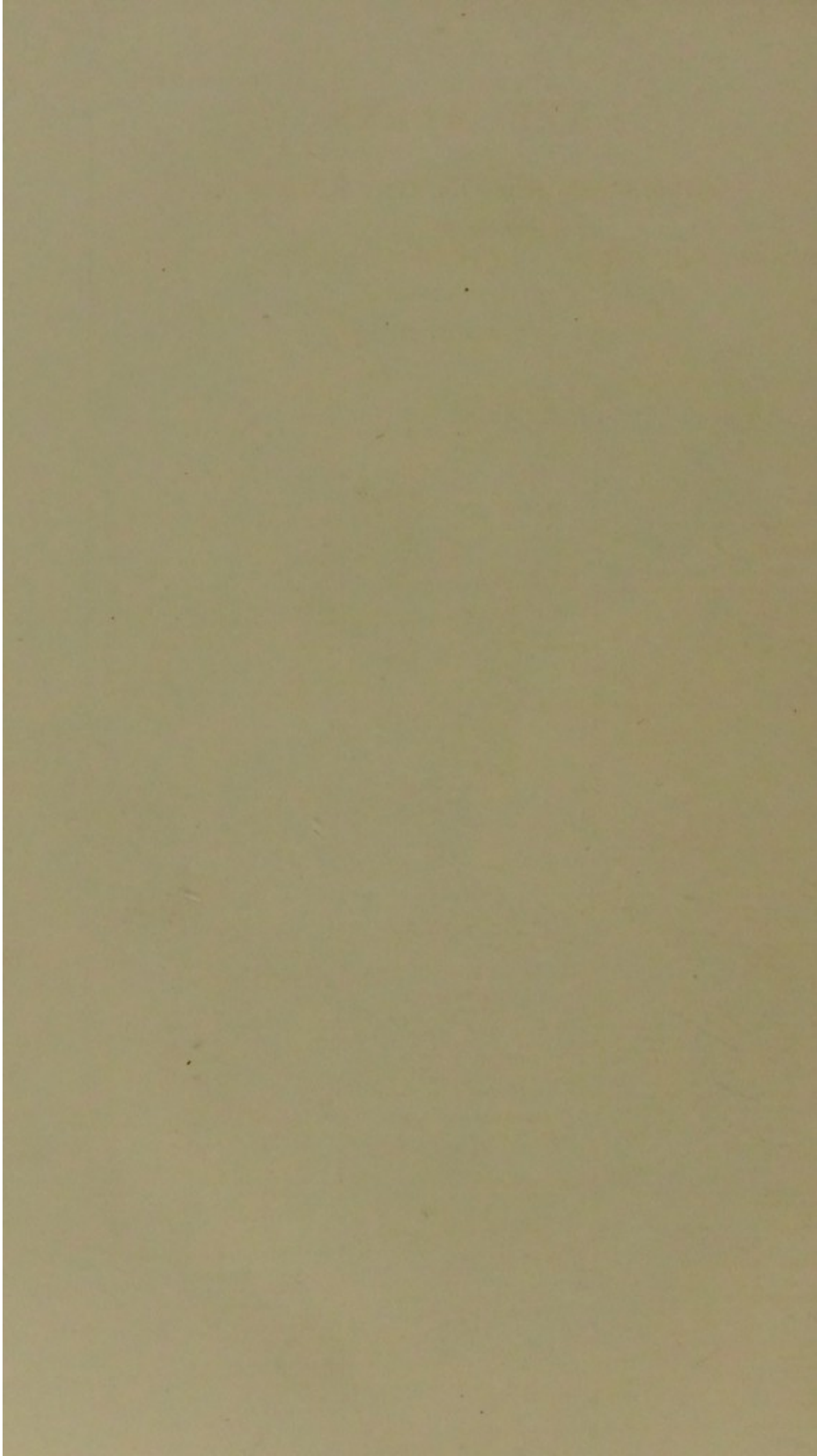






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