SOME CLINICAL FEATURES OF THE SEVERAL TYPES OF COLITIS.*

By H. A. CALEY, M.D., F.R.C.P.,

PHYSICIAN TO OUT-PATIENTS, AND LECTURER ON PHARMACOLOGY AND THERAPEUTICS, ST. MARY'S HOSPITAL.

THERE can be no question that colitis, in one or other of its several types, is far more common than is at present recognized, notwithstanding the increased attention which has been devoted to the subject of recent years, and that, in proportion as anomalous abdominal and neurasthenic cases are carefully investigated, is the evidence of its comparative frequency forthcoming. The term "colitis," though discarded by some authors in favour of "mucous colic," is intentionally retained as being the most comprehensive term to cover the wide range of morbid conditions characterized by disorder of the mucous membrane, or of the mucous secretion of the colon, and ranging from simple catarrhal inflammation at one extreme to grave ulcerative colitis at the other, with the large and varied group of cases classed as muco-membranous colitis occupying an intermediate position. Moreover, the designation "colitis" appears to me preferable to other synonyms, for the very reason that it emphasizes the fact that, however important other factors—for example, the neuropathic—may be, especially in relation to the membranous type, we have in all such cases to deal with a definite disorder of the colon, only to be effectively managed by improving the local conditions of the bowel itself. Further, whilst it is true that in the majority of the cases included under the designation of muco-membranous colitis the changes which occur are such as could be explained as the outcome of simple catarrh of the mucous membrane, or even as a mere disorder of the mucous secretion—a myxo-neurosis—it is possible in exceptional cases to trace a gradual transition from this superficial affection to a condition in which all the coats of the bowel become involved, leading to a more or less severe pericolitis, with local peritoneal inflammation, and possibly suppuration.

CLASSIFICATION OF THE SEVERAL TYPES.

Careful differentiation is the first essential to an accurate appreciation of the groups of affections under consideration, but at the outset of any attempt at classification we are confronted by the inadequacy of the pathological data available, and the consequent necessity of falling back, at least provisionally, upon an approximately accurate division into clinical types. The following is adopted with the proviso that the distinguishing features between the several groups are often merely relative, and that in individual cases the types may shade off into one another.

I. Catarrhal, or simple mucous, colitis.

(1) Acute:

- (a) Primary (that is, primary infective inflammation of the colon).
- (b) Secondary (that is, secondary to other morbid states—for example, specific fevers, toxæmias, Bright's disease).

(2) Chronic:

- (a) Irritative type.
- (b) Atonic and spastic types.

II. Membranous, or muco-membranous, colitis.

III. Parietal colitis and pericolitis

- (including "sigmoiditis," pericolitis sinistra, and perityphlitis).

IV. Ulcerative colitis.

- (1) Endemic (tropical dysentery).
- (2) Epidemic (for example, "asylum dysentery").
- (3) Sporadic:
 - (a) Primary, "simple," or "idiopathic."
 - (b) Secondary (that is, secondary to general diseases or to local affections of the lower bowel—for example, stricture).

The essential points in the foregoing classification are the differentiation of simple catarrhal or mucous colitis from the typical membranous or muco-membranous form, the subdivision of the catarrhal cases of Group I into the acute and chronic forms, with the two subgroups of the latter, into cases associated with diarrhoea (the irritative type) and those associated with constipation (atonic and spastic types); and the recognition as a distinct class of

cases included under Type III—that is, severe forms of colitis, in which not only the mucous, but the muscular and serous, coats become involved. That the differentiation of membranous colitis from the simple mucous type, is of practical importance is illustrated in relation to the different treatment of the two types; the coarse laxative diet so strongly advocated by von Noorden and others, whilst most useful in some cases of membranous colitis associated with constipation and intestinal spasm, is not well borne, and is, I believe, fundamentally unsound in cases of the irritative type of mucous colitis; in the latter, a light nutritious diet such as will leave but a minimal faecal residue agrees best; in other words, whilst "dietetic exercise" is of importance in the one type, in the other "protection" of the irritable mucous membrane of the bowel is the keynote of successful treatment.

CHARACTERISTICS OF THE SEVERAL TYPES.

Simple Catarrhal Colitis.

The acute form is characterized by diarrhoea with excess of mucus, and not uncommonly blood in the stools, colicky pains, in some cases tenesmus, and almost invariably more or less tenderness, particularly in the regions of the caecum and ascending colon, and of the sigmoid flexure. There is also usually some fever; it may be slight and transient, whilst in other cases the temperature may range high for days and be accompanied by other evidences of severe general toxæmia. Acute catarrhal colitis may be part of a general enterocolitis, in which case the distinctive colitis symptoms may be of comparatively late development, as in some cases of so-called "inflammatory diarrhoea" in children, or from the outset the colon may be conspicuously affected. Some cases accompanied by high fever and severe local signs may subside very rapidly with efficient treatment, irrigation enemata of normal saline solution being particularly useful.

Chronic Catarrhal Colitis.

This is frequently a sequela of an acute attack, and if careful inquiry is made the chronic colitis is often found to have followed on an acute attack of diarrhoea, of which, perhaps, at the time but little notice was taken; on the other hand, and more usually, this form develops insidiously as a result of constipation and chronic indigestion, especially in persons of neuropathic or "arthritic" tendencies. This group comprises two principal forms:

(a) Those characterized by loose mucous or watery evacuations, periodical diarrhoea, or more or less chronic diarrhoea; "morning diarrhoea," lasting for months or years, is not infrequently of this origin. Associated with these disordered evacuations there may be irregular colicky pains, and local tenderness in the affected regions.

(b) The atonic type is characterized by constipation, with excess of mucus in the stools, usually in the form of viscid masses, or ropy strings, the faeces being frequently lumpy and ill-formed. At other times scybala ensheathed in a mucous envelope may be passed. On examination of the abdomen the colon may be found to be dilated, and not uncommonly faecal lumps may be detected in the region of the sigmoid. In other cases—those of the spastic type—spasm rather than atony is conspicuous, pain is usually more marked, and the sigmoid may be felt contracted instead of distended. It cannot be too much emphasized that whilst the acute forms of colitis, whether catarrhal or ulcerative, have diarrhoea as a prominent symptom, in the large majority of chronic cases, catarrhal or membranous, constipation is the rule, and frequently most intractable, so much so that cases of "chronic constipation" are not uncommonly found, on careful investigation, to be examples of chronic colitis, with constipation as the dominant symptom. It will be understood that cases of chronic catarrhal or mucous colitis may merge insensibly into the membranous type; indeed, the condition may in some cases be regarded as an early stage of the membranous form, but it is none the less important to make the broad distinction between the two groups, since in many instances the affection never assumes the typical membranous, and more intractable, form if appropriately treated.

RELATION OF CHRONIC COLITIS TO OTHER AFFECTIONS.

Catarrhal colitis, especially in its atonic form, is of importance in relation to other intestinal disorders, notably:

* A paper communicated to the Medical Society of London, March 12th, 1906.

- (a) Atonic dilatation of the colon; (b) appendicitis; (c) enterospasm.

Atonic Dilatation of the Colon.

In some of the worst cases of dilatation of the colon which I have seen in young children, it has been possible to trace a clear history of chronic colitis—the passage of mucus, often in large masses, attacks of pain coinciding with fresh discharge of mucus, and persistent constipation, with not uncommonly the occasional passage of large faecal or muco-faecal masses which had accumulated in the sacculated colon. It may be contended that the irritation of the mucous membrane is secondary to accumulation of faecal debris, in consequence of the enfeebled muscular action; this no doubt is the case to some extent, but a careful survey supports the view that at least in many of these cases the mucous membrane lesion is primary, and the muscular atony secondary, as in the analogous instance of atonic dilatation of the stomach following long-standing chronic gastritis. Personally I am of opinion that not uncommonly the so-called idiopathic dilatation of the colon is the outcome of unrecognized chronic colitis, with gradual atony and yielding of the muscular coats of the bowel. The following is an illustrative case:

N. J., a boy aged 7 years, came under treatment for “chronic constipation” of long standing, with history of occasional passage of large motions. On examination the colon was found to be greatly distended, and on inquiry it was ascertained that mucus had often been passed in large amounts, and was present in excess. Under treatment by laxative diet, aperients, and massage, gradual improvement took place, though the symptoms persisted in mild degree, and at times scybala encased in mucus were passed. Two years later he passed a considerable amount of intestinal sand.

In adults as well as in children it is possible not infrequently to trace chronic colitis in cases of atonic dilatation of the colon and in elderly persons the combination of the two conditions may simulate malignant disease of the large bowel.

RELATION OF CHRONIC COLITIS TO APPENDICITIS.

Colitis is important in three ways: (1) As a cause of appendicitis; (2) as a complication of appendicitis; (3) as a simulator of appendicitis.

1. Colitis as a Cause of Appendicitis.

If the antecedent clinical history of cases of appendicitis is carefully inquired into, it is not uncommon to find, especially in the chronic and relapsing cases, that, prior to the first attack of appendicitis, and it may be subsequently in the intervals between successive attacks, there had been symptoms of colitis—local pain or discomfort along the course of the colon, transient attacks of diarrhoea, with mucous or watery evacuations; and, more commonly still in my experience, symptoms of the atonic form—constipation, lumpy stools coated with mucus, occasional pain in the right lumbar or left iliac regions, besides in the immediate vicinity of the appendix. This association naturally suggests the inference that under certain conditions chronic colitis is a pathological antecedent of appendicitis, an inference which is in accord with the pathological anatomy of appendicitis, particularly in its chronic forms, the swelling and thickening of the mucous membrane leading to partial or complete stenosis of its lumen, being evidently the outcome of chronic inflammation of the mucous lining. Chronic colitis is, I believe, an important antecedent of appendicitis, particularly of the milder and more chronic forms, and it may be that the formation of concretions which are so largely responsible for the graver forms of appendicitis, which, as is well known, frequently come on without any antecedent bowel symptoms, is also connected with disordered secretion of the mucous membrane of the caecum and appendix, paving the way for the depredations of the *Bacillus coli* and its congeners. In referring to colitis as a cause of appendicitis, the converse must not be overlooked—that is, instead of being the cause, the colitis may be the consequence of the appendicitis to the extent that removal of the appendix cures the colitis, as has been pointed out by Mr. Lockwood.¹ It is, however, probable, even in such cases, that in the first instance the initial lesion is more widespread, though the affection of the appendix subsequently becomes dominant. Colitis of the atonic type has a further bearing on the etiology of appendicitis: it is a potent cause of the dilatation of the

caecum and ascending colon leading to faecal accumulation, which is now recognized to be a most important predisposing cause of appendicitis, and it may also be the precursor of that condition of partial obstruction of the caecum and ascending colon to which Arbuthnot Lane has directed attention as simulating appendicitis.² In considering the connexion between appendicitis and catarrhal colitis, it is of interest that appendicitis is only a rare complication of the membranous form; thus De Langenhagen³ found in 1,200 cases of muco-membranous colitis only 16 cases of appendicitis, and of these 16, 14 were still troubled with colitis symptoms after excision of the appendix. Dr. Bottentuit of Plombières tells me that in the last six years he has had under his care 22 cases of muco-membranous colitis in which the appendix had been previously removed without materially relieving the symptoms.

2. As a Complication and as a Simulator.

Colitis may at times complicate appendicitis, thus rendering the diagnosis less easy, or it may complicate the treatment, as in the following case:

A boy, aged 12, was operated upon for appendicitis, having had several slight attacks. The appendix, which contained two small concretions and was superficially ulcerated, had been removed, and for the next seven days the patient appeared to make good progress, but on the eighth day the temperature rose to 102° F., and he had severe pain in the right iliac and lumbar regions, and passed motions consisting of flaky masses of mucus mixed with blood and some faecal matter. The caecum and ascending colon were exquisitely tender, and there was marked muscular rigidity, evidently due to an acute colitis most intense in the region of the ascending colon. The temperature subsequently rose to 103° F., and the boy became more ill. With large irrigation enemata of normal saline solution, strict dieting, and a combination of bismuth, salol, and salicin he soon improved, and in a week all the symptoms of colitis had subsided, and convalescence was henceforth uninterrupted.

Not infrequently the association of colitis with cases diagnosed as appendicitis is not recognized until excision of the appendix has failed to remove the symptoms; indeed, unless the precise condition of the appendix at the time of the operation was accurately noted, it may be difficult to say whether the colitis should be regarded as a complication of, or as a simulator of, appendicitis, as in the following cases, in which the appendix had been removed without appreciably relieving the symptoms, improvement subsequently occurring when the colitis was taken in hand.

H. R. M., aged 38, seen in consultation September, 1903. For twenty years he had suffered from bowel trouble, chiefly pain and constipation, and for several years he had noticed membranous masses in the stools; the symptoms became more acute; he had three attacks of appendicitis, and the appendix was removed in 1895—without apparent benefit. On inquiry, it was ascertained that the pains had been chiefly in the right iliac and lumbar regions, and on examination there was marked tenderness with muscular rigidity from the caecum to the hepatic flexure, and there was evident distension of the caecum and ascending colon. With careful dieting, large irrigation enemata which brought away masses of mucus, and full doses of bismuth, he has steadily improved, and is now in fair health.

B. C., aged 38. Subject to attacks of abdominal pain for fifteen years; appendix removed in 1903; he was better for some months, but the attacks subsequently returned as badly as ever. On examination, there was considerable tenderness over the caecum and ascending colon, and a diagnosis of chronic colitis was made. He was treated with strict diet, bismuth, and alkalies; all the symptoms have steadily improved, and there has been no return of the acute attacks.

Much more might be said in this connexion did time permit, but from the foregoing it is at least clear that affections of the caecum and ascending colon no less than appendicitis should receive careful consideration in all anomalous cases presenting symptoms of right-sided abdominal mischief.

CHRONIC COLITIS IN RELATION TO ENTEROSPASM.

The importance of acute enteralgia apart from appendicitis, obstruction, and gross inflammatory lesions of the intestine, has of late attracted considerable attention; and Dr. H. P. Hawkins, in a recent valuable communication,⁴ has emphasized the reality of enterospasm and its simulation of appendicitis. However important the nervous factor may be in the production of these attacks—and it is certain that the worst cases are met with in

neurotic persons—there are strong reasons to think that the painful spasm is frequently an exaggerated reflex phenomena, started by local irritation in the bowel. Certain it is that acute paroxysms of pain such as are met with in chronic colitis, membranous or mucous, may be indistinguishable from attacks of enterospasm occurring apart from any demonstrable lesion; and, further, that whether nervous exhaustion or excitement on the one hand, or constipation on the other, is the exciting cause, the most effective treatment is that which combines thorough evacuation of the bowels with antispasmodics, just as castor-oil and opium give better results in lead colic than a pure antispasmodic such as morphine and atropine. The inference is that the starting point of enterospasm is not uncommonly to be found in some local focus of irritation in the large bowel; and it is evident that the plugs, masses, or casts of mucus, such as are present in mucous or membranous colitis, or the hard faecal pellets which are often associated with the mucous exudation, are very likely to set up irregular peristalsis, which may develop into an acute attack of enterospasm. Two other considerations may be adduced in support of this view: (1) Examination of the colon during attacks of pain in colitis may at times demonstrate the existence of actual spasm of the bowel, the descending colon, sigmoid flexure, or transverse colon being contracted and cord-like, or the sigmoid flexure may be felt distended and its muscular coats contracting above a faecal mass lower down; (2) improvement in all symptoms may date from the evacuation of hard masses of mucus and faeces, as in the following case:

A lady, aged 44, seen in consultation November, 1905. After a period of protracted nervous strain she was seized with an acute illness, the prominent symptoms being intense paroxysms of abdominal pain, chiefly on the right side, with retching, vomiting, and marked collapse. The temperature was normal, and there were no signs of appendicitis or pelvic peritonitis. The pain was such that morphine injections alone afforded relief. The pain became so severe, the vomiting continuing, and the pulse frequency rising to 120, that laparotomy was seriously discussed; examination under an anaesthetic was, however, negative, and it was decided to wait. Morphine was stopped and heroin substituted, and as a result of enemata, and cascara by the mouth, the bowels were induced to act. Large, round pebble-like masses of faeces mixed with mucus were passed, which had the appearance of having been churned about, like stones in a glacier mill. From that time convalescence was uninterrupted, and though the constipation was troublesome for some weeks, with the continuance of slight mucous exudation, the symptoms gradually subsided, and the patient is now well.

Whilst not detracting from the essential importance of the nervous factor in the production of attacks of enterospasm, it appears to me highly probable that in most of these cases there is some local focus of irritation which engenders the enterospasm as an exaggerated reflex phenomenon. This being so, it follows that to search for any such local lesion is of the first importance in relation to treatment, whether surgical or medical.

MEMBRANOUS COLITIS.

By most writers muco-membranous colitis is employed as a general designation to cover all cases of chronic colitis other than those of the ulcerative type; but, as already indicated in connexion with chronic catarrhal colitis of the mucous type, it is preferable to restrict the term "membranous colitis" to the form of chronic colitis characterized by:

1. The presence of membranous or muco-membranous exudation as distinct from simple mucous secretion in the dejecta, usually in the form of membranous masses, tubular casts, or pellicular shreds; these in water tend to unfold into membrane-like masses which first gave the affection its name.

2. Irregularity of the intestinal functions, with constipation, often intractable, as its most conspicuous feature.

3. Pain, which is broadly of two kinds—constant or variable dull aching pain or discomfort in some part of the colon, most usually the caecum, ascending colon, or sigmoid flexure; and paroxysmal pain—ranging from slight attacks of colicky pain to intense enterospasm. This group does not, therefore, include the milder cases which have already been described under chronic catarrhal colitis, nor does it include the more severe cases of chronic colitis in which all the coats of the

bowel—submucous, muscular, and serous—are involved as well as the mucous membrane. These are grouped as a separate class, designated parietal colitis and pericolicitis, Type III. With these limitations, membranous colitis is a fairly well-defined group, with certain etiological and clinical associations, and is usually characterized by a chronic and not uncommonly intractable course. Whilst it may occur in childhood or early life, membranous colitis is usually met with in middle life—25 to 45, and is more common in women than in men, being not infrequently associated with uterine disorder. In its clinical evolution certain phases can usually be traced—a period of chronic constipation, then a mucous discharge is noticed, at first of a glairy or stringy nature, and later more membranous in character; sooner or later more or less pain or discomfort will be experienced, the results of intestinal irritation and irregular peristalsis. Finally, if the condition persists, the muscular coats of the intestine become further weakened, and atonic dilatation of the colon supervenes, or spasmodic symptoms may predominate, and not uncommonly there is associated dilatation of the stomach, tympanites, enteroptosis, and nephroptosis, the last being especially common. The earlier phases of membranous colitis obviously closely correspond with the symptoms of the catarrhal type; indeed, although this is opposed to the view of those who regard "mucous colic" as essentially neurotic in origin, it is probable that many, and it may be the majority, of the cases of membranous colitis originate in this way, a point which in my judgement is of primary importance in relation to treatment, since to be effective it should be essentially preventive.

ETIOLOGICAL FACTORS.

Whilst there is still much difference of opinion as to the precise pathology of membranous colitis, whether it is primarily a form of chronic inflammation, or a secretory neurosis, the investigations of recent years have brought out certain cardinal facts as to its clinical etiology, especially in relation to chronic constipation (coprostasis), "arthritis," and neuropathic states.

Constipation in relation to Membranous Colitis.

Careful inquiry shows that of all clinical antecedents constipation is the most constant. A history of chronic constipation before the characteristic symptoms of colitis developed is rarely absent, though not uncommonly its importance has been overlooked by the patient, which means neglected as well as chronic constipation.

"Arthritis" in relation to Membranous Colitis.

It has been said that "the arthritic diathesis is found at the origin of every muco-membranous enteritis" (De Langenhagen). This statement at first sight appears too absolute, but from critical inquiry into the cases which have come under my own observation, I believe it to be substantially true as to the frequency of the association of the two conditions. In the large majority of cases in which an accurate history can be obtained, a gouty or rheumatic element, inherited or acquired, can be traced, usually in one of the following ways:

1. A definite family history of gout, rheumatism, articular or muscular, or rheumatoid arthritis.

2. The occurrence of gouty or rheumatic symptoms antecedently to the colitis, and in some cases an apparent alternation between the intestinal and the rheumatic symptoms.

3. The development of rheumatic symptoms as a sequela of chronic colitis; and in this connexion it is worthy of remark that the kinship appears to be rather with the chronic and fibrous forms of articular and muscular rheumatism (fibrositis) than with acute rheumatism. It is of interest in this same connexion that chill, excessive consumption of animal food, and certain wines, which will at one time induce arthritic or myalgic symptoms, may at another aggravate or even induce colitis symptoms; and, further, that eliminants, alkalies, salicin, and the salicylates may be of service in colitis as in rheumatic arthritis or myositis—considerations which have an important bearing on treatment, both dietetic and medicinal.

The Neuropathic Factor in Membranous Colitis.

The association of neurasthenic symptoms with membranous colitis is now so generally recognized as to be adduced as an argument in favour of the colitis being

primarily neuropathic—a secretory neurosis; analysed further, in a well-developed case the association is seen to be twofold: the neurasthenic symptoms may fluctuate with the bowel symptoms, and, on the other hand, aggravation of the bowel symptoms may directly follow nervous disturbance induced by anxiety or overstrain. Some differences of opinion have been expressed as to the sequence of the two—whether the neurasthenia precedes the colitis, or the colitis the neurasthenia. Whilst nervous strain appears to be a definite predisposing cause of colitis, it is certain that profound nervous disturbances are usually met with in long-standing cases of the disease; thus De Langenhagen, who investigated this point, found that, out of a series of 304 cases, in only 16 had the neurasthenia preceded the intestinal disorder, leaving 288 in which it developed subsequently. It seems as if we can hardly evade the vicious circle, neurasthenia predisposes to colitis, and colitis induces or aggravates neurasthenia; practically the important point is that constipation *plus* a “neuro-arthritis” tendency may result in membranous colitis, and that, given that condition, treatment to be effectual must aim at improving the local conditions, while associated neurasthenic, rheumatic, or gouty factors are simultaneously combated.

Influenza and Colitis.

Another factor in the etiology of colitis is influenza, though numerically of much less importance than those previously referred to. This association may be traced in the following ways:

1. Influenza of the gastro-intestinal type may present symptoms of acute or subacute colitis, though a general enteritis is more common; the colitis may rapidly subside or it may pass into a chronic phase.

2. Chronic colitis, catarrhal or membranous, may be much aggravated by an attack of influenza; indeed, the latter is a fruitful cause of relapse in cases of colitis otherwise doing well.

3. Colitis may apparently originate in an attack of influenza, the bowel symptoms dating from that time, and in such cases it is highly probable that the lowered nervous tone, so conspicuous an after-effect of influenza, plays an important part.

SOME CLINICAL ASSOCIATIONS OF MEMBRANOUS COLITIS.

Whilst the diagnosis is usually indicated by the symptoms and the characters of the dejecta, physical examination of the abdomen is most important for confirming the diagnosis and revealing unsuspected complications. In severe cases the abdominal walls are lax; enteroptosis is not uncommon; still more frequent is nephroptosis, being present in 290—272 on the right side and 18 on the left side—out of 1,200 cases in De Langenhagen's series.

Physical Examination of the Colon.

The conditions present vary according as atonic dilatation, spasm, or inflammatory changes are in the ascendant. The caecum is frequently distended and tender, and the distension may be so marked, especially over the ileocaecal valve, as to resemble appendicitis. In long-standing cases the walls of the caecum and colon may be palpably thickened, similar signs may be present over the ascending colon as high as the hepatic flexure, and both over the caecum and ascending colon the presence of gas and liquid faecal matter may produce a gurgling or quelching sensation—“*sensation de l'intestin chiffon*” of French writers. Another very characteristic sign if present, though more commonly met with in the transverse and descending portions, is a cord-like contraction of the bowel, the result of spasm, which may at times be demonstrated in cases of acute enteralgia. The transverse colon may be distended, so much so as to resemble a dilated stomach, although this is perhaps more frequent in chronic catarrhal colitis than in the membranous form; in the latter, more characteristic is the spasmodic contraction of the transverse colon producing the so-called “colic cord” extending across the abdomen. This is usually a transient condition, due to spasm, but rarely it may be permanent, and due to progressive thickening of the walls of the gut with stenosis of its lumen. The descending colon and sigmoid flexure frequently exhibit some abnormal signs; of these tenderness in the left iliac fossa with distension, and frequently the presence of scybala, are the most frequent, but in this region also a

cord-like contraction due to spasm may be very marked. At times, especially if the abdomen is examined during an attack of painful spasm, the walls of the sigmoid flexure may be felt contracting under the hand, as if due to exaggerated peristalsis above obstruction lower down from faecal accumulation or spasm, and in such a case the contraction and distension will completely subside after thorough evacuation, as from an olive oil enema. This reference to symptoms from spasmodic stenosis brings to mind two rare cases of chronic colitis in which there was actual mechanical obstruction. In one there was chronic stenosis of the whole length of the transverse colon, which on *post-mortem* examination was found reduced to a tough cord with a chink-like lumen communicating with small sacculi containing faecal pellets, death resulting from acute appendicitis and intestinal obstruction combined. In the other, the obstruction, which was evidenced by visible peristalsis as well as by severe pain, was due to the impaction of large masses of dense mucus. In this last case all the obstructive symptoms disappeared as the masses of mucus were gradually got rid of.

PARIETAL COLITIS AND PERICOLITIS.

More serious than the foregoing varieties of colitis is the type of case characterised by deeper and more diffuse inflammatory changes, involving the submucous, muscular, and serous coats. The implication of the serous coat, if sufficiently marked, produces definite local peritonitis and in some cases cellulitis, the condition known as pericolicitis—if in the region of the sigmoid flexure pericolicitis sinistra, if in the vicinity of the caecum perityphilitis, employing the old term in the strict sense of pericaecal inflammation distinct from inflammatory lesions the outcome of appendicitis. To avoid the possibility of confusion, the term “pericolicitis dextra” would be perhaps preferable, and have the additional advantage of including also cases in which the pericolicitis starts from the ascending colon. The distinctive pathological feature of pericolicitis is the spread of infection through the submucous and muscular coats so as to involve the serous membrane, and the clinical correlative is local peritonitis, with pain, tenderness, muscular rigidity, dullness on percussion, and frequently induration about the distended and inflamed bowel. Pericolicitis exceptionally may come on acutely as a local complication of ulcerative colitis, but as a rule it comes on insidiously after long-standing chronic constipation. This involvement of the serous coat usually presupposes the existence of a lesion of the subjacent mucous membrane, which may be part of a general colitis, or of more localized inflammation as in the condition known as “sigmoiditis.” Now systematic examination of cases of chronic colitis and of “chronic constipation” occasionally reveals the existence of general thickening of the walls of the colon without evidence of actual pericolicitis—it is to these cases that I have applied the term “parietal colitis”—a condition which is certainly present in not a few cases usually classed as chronic colitis, and which may be of serious importance as paving the way for pericolicitis, with its grave dangers of spreading peritonitis and cellulitis. Experience shows that severe pericolicitis is fortunately a rare affection, but pericolicitis of a milder and usually more chronic type associated with catarrhal or membranous colitis is not, I believe, by any means so rare, and has an important bearing on the production of faecal impaction with partial obstruction, and also in relation to chronic appendicitis. The following is a good illustration of chronic parietal colitis and pericolicitis:

Case of P. B., aged 46. Marked family history of gout; had suffered severely from chronic gouty arthritis, uric-acid gravel, and myositis for years, with an occasional attack of acute gout. Beyond some indefinite pain in the right hypochondrium, no abdominal trouble was noticed until early in 1904, when he was suddenly seized with acute pain in the left half of the abdomen—so severe as to resemble a perforative lesion. On examination there was local tenderness and marked muscular rigidity in the left iliac fossa, with slight rise of temperature (100° F.). This was the beginning of a typical attack of pericolicitis sinistra, and it is noteworthy that on two or three occasions fresh blood was passed in the stools, which contained a considerable amount of mucus. He gradually recovered from these local symptoms, but the colon remained much dilated, and its walls were thickened, particularly in the region of the caecum and ascending colon. In the following year, after a neglected gouty attack, he developed pain and tenderness over the caecum and ascending colon, which were much distended. In the caecal region there was intense ten-

derness, some muscular rigidity, and dullness on percussion; but on deep palpation the outline of the distended and thickened caecum could be distinctly felt. With this attack there was no haemorrhage and little mucus in the stools, but there was at one time aphthous stomatitis, an occasional concomitant of colitis. There were no signs of appendicitis, and it was evident that the condition was one of pericolicitis dextra; this slowly improved under treatment, though the walls of the caecum and ascending colon are still abnormally thick, and the whole colon is dilated.

Apart from its direct importance, pericolicitis has a significant bearing on the differential diagnosis of obscure abdominal lesions; if on the right side it may produce symptoms and local signs difficult to distinguish from periappendicular lesions in the more acute cases, or from malignant disease of the caecum in its more chronic form; if on the left side, the pericolicitis may be overlooked, the case being regarded as one of "chronic constipation" until some more formidable complication develops, or if there is much distension of the bowel with inflammatory induration malignant disease of the sigmoid may be erroneously diagnosed.

ULCERATIVE COLITIS.

In its most severe and characteristic form, tropical dysentery, the symptomatology of ulcerative colitis is well known, and of recent years much attention has been given to cases coming under Subgroups 2 and 3—that is, to epidemic outbreaks of "asylum dysentery" such as that so ably described by Gemmel,¹ and to more limited outbreaks, such as that described by Dr. Carver in his communication on acute infective colitis to the Medical Society of London last session. Of the sporadic forms, "simple" or "idiopathic" ulcerative colitis has obtained general recognition since Dr. Hale White published his series of cases in *Guy's Hospital Reports* for 1888. Recent pathological and bacteriological investigations have tended to bridge over the differences between the several forms of ulcerative colitis and to approximate them to dysentery proper.

As to the clinical characteristics of ulcerative colitis, all that can be said here is that in typical cases the diagnosis is clear owing to the coexistence of: (1) Symptoms of intensely acute colitis with pain, diarrhoea, tenesmus, characteristic brownish-red stools of viscid mucus and blood; (2) severe constitutional symptoms, usually high fever, and always marked prostration and wasting; (3) a third characteristic feature is the frequency of serious local complications—perforation, peritonitis, local or general, severe haemorrhage, and uncontrollable diarrhoea. The diagnosis is, however, not always so easy, the characteristic complex of symptoms may not be present until quite late in the disease, the onset may be insidious and misleading; indeed, chronic diarrhoea without the characteristic stools may be the only definite symptom. In this, as in the other and less severe types of colitis, great variations will be found, and in atypical cases the true nature of the disease may only be discoverable by critical scrutiny of the symptoms, systematic investigation of the dejecta, and careful physical examination of the colon.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, 1905, i, p. 466. ² Arbuthnot Lane, *Lancet*, 1903, i, p. 152. ³ M. de Langenhagen, *Muco-membranous Enterocolitis*. ⁴ BRITISH MEDICAL JOURNAL, January 13th, 1906, p. 1898.

TWO CASES OF RUPTURED DUODENAL ULCER.

WITH A NOTE ON THE EFFECT OF POSTURE ON THE LOSS OF LIVER DULLNESS.

By JOHN CLAY, M.B., F.R.C.S.,

ASSISTANT SURGEON, ROYAL INFIRMARY, NEWCASTLE.

THE two following cases are good examples of perforation of the duodenum without either vomiting or abdominal distension.

CASE I.

E. S., aged 32, a painter, was admitted on October 9th, 1905, at 8.30 p.m., suffering from an acute attack of pain in the abdomen.

History.

He gave the following history: For the past nine years he had suffered from severe pain in the epigastric region, coming on sometimes immediately and sometimes an hour and a half

after food. The pain was accompanied by abdominal distension and palpitation of the heart.

At 4 p.m. on the day before admission, the pain was more severe than usual, but he continued to work.

At 11.30 a.m. on the next day, while working, the pain came on so severely he was obliged to go home. He attempted to walk, but was obliged to lie down by the roadside. There was no vomiting, the bowels did not act, and no flatus was passed. At 2.30 p.m. $\frac{1}{2}$ gr. morphine was given previously to sending him to hospital.

Condition on Admission.

He was quite warm and not collapsed. The pulse was 120 and the temperature 101° F., with the tongue moist and only slightly coated. The abdomen was uniformly painful, retracted, and very rigid. It was extremely tender, but no mass or dull area could be made out. The liver dullness was present.

Operation.

At 9 p.m. a median incision was made from ensiform cartilage to umbilicus. On dividing the peritoneum gas escaped at once. The ulcer was found in the duodenum 1 in. from the pylorus. The ulcer was closed by one suture of thick catgut through all the coats of the bowel. This was buried with Lembert sutures of fine catgut. The peritoneal cavity was washed out with hot saline solution, and drained from both flanks and from above the pubes. Rubber tubes only were used. The incision in the epigastric region was completely closed.

The drainage tubes were removed twelve hours after the operation, and recovery was uneventful.

CASE II.

P. P., aged 58, a cartman, was admitted on January 27th, 1906, at 3.30 a.m., suffering from acute pain in the abdomen.

History.

At 10 a.m. on January 26th he felt sudden severe pain at the lower part of the abdomen. The pain increased in severity, and two hours later he was found lying on the ground doubled up with pain. At this time the pain, it was stated, shot into the right testicle. Since the commencement of the attack the bowels had not acted and no flatus had been passed, yet he had never vomited. A week previously he had consulted a chemist for what he called a "kidney attack."

Condition on Admission.

He looked very ill, and was collapsed. The pulse was irregular and small, 135; the temperature 99° F. The abdomen was retracted, immovable, and extremely rigid. It was tender all over. The left flank was dull, but the right was resonant. The liver dullness was absent in the nipple line and in the mid-axillary line. The urine contained albumen, but no pus or blood.

Operation.

The operation was similar to that in the first case, the ulcer being similarly situated. The peritoneal cavity contained a large quantity of bile-stained fluid. It was washed out and drained from both flanks and above the pubes. His condition never improved, and he died twenty-four hours after operation.

Necropsy.

A post-mortem examination was made. There were two ulcers close together in the duodenum. One of them had perforated, the aortic valves were very calcareous; two of the cusps appeared to have fused together.

It will be observed that the liver dullness was absent in one of the cases. I have noticed in connexion with this loss of liver dullness that the dullness can be made to return by getting the patient to roll on to his right side; but that when the patient is turned on to the left side the dullness is not at once again lost, but only after some jerky movements, such as coughing or retching, have been made.

The explanation appears to be that, when these cases are turned on to the right side, the liver returns to its accustomed place, and there sticks until some sudden movement of the diaphragm shakes it off. It is, therefore, of value to bear in mind how this diagnostic sign of pneumocoele is altered by change of position.

MR. JAMES CANTLIE, speaking at the Commemoration Day proceedings at Livingstone College last week, said that in tropical countries disease struck down its victims with terrible suddenness, and it was necessary that ordinary missionaries should know how to deal with the more common diseases. People said that a little knowledge was a dangerous thing, but the course at Livingstone College gave to missionaries exactly the teaching they required. He regretted that the chief missionary societies had not dealt with the matter adequately by sending missionaries to uncivilized lands without proper equipment in the way of medical knowledge. They were juggling with men's lives.