A good summary

A Dissertation on

Dysentery by [handwritten]

[Handwritten text not legible]

[Handwritten text not legible]
Diabetes is one of those diseases the pathology of which has remained involved in so much obscurity and even in the present day remains a problem still to be solved. It seems remarkably strange to think that those who ought to have been the very ones to have enlightened the medical world concerning its pathology, viz. the medical men of the tropics, have instead of this only thrown more obscurity upon it, for instead of combining their different experiences & thus coming to correct conclusions, each one has set loose quill to paper and described his own individual cases & would have every one to believe his was the correct idea, and that the disease exist everywhere else in the same form as it does in his own limited sphere of action. It can be readily conceived that to come to the correct knowledge much of its pathology must lie
anything but an easy matter, being that it varies so much in different countries and localities, as for instance the epidemic cases which occur in our towns, differ widely from epidemic attacks, and these again are more so from that which exists in tropical climates. The mortality from dysentery exceeds that from any other disease in warm climates. It is it which for ages has been the destruction from time to time of the flower of our armies and fleets in foreign stations. It followed the armies which traversed Europe during the continental wars of the past 200 years. It was it which partly destroyed the English troops in Holland in 1748, and the French, Prussian & Austrian armies in 1793. Various other instances of its ravages might be enumerated, but this will suffice at present to show the destructive nature of the malady. Sir Ronald Martin remarks concerning this disease in the following words: "it is the disease of the famished garrisons of besieged towns, of barren encampments and of fleets navigating tropical seas, when fruit & vegetables cannot be procured. During the peninsular wars, the first Burmese war and the late war with Russia, dysentery was one of the most prevalent & fatal diseases which reduced the strength of the armies." About 200 years ago dysentery was one of the most
formidable disease existing in London, but since the year 1852 the mortality from it has diminished greatly. But although the disease has diminished as regards its frequency of occurrence yet those cases which do still occur from time to time do not differ in character from those described by Eydenham 150 years ago. Seeing that it has existed for so long a time, it seems strange how such a variety of opinions have been and are held by medical men as to its pathology, so much so indeed that Dr. Harvey remarks that in the various dissections given by them, they scarcely agree in any one point excepting in the name. Cullen has described it as the following—

"Pyrexia contagiosa, demonstrata frequentes mnesae vel congenitales, utens plurumque specibus alminis, tumina tegumentum." This definition has been however objected to by many writers, particularly the first part. Ballingal denies the propriety of calling it "Contagiosa" so do also Johnson, John Hunter, Zimmern, and many others who are entitled from their experience and eminence to some consideration & credit, while on the other hand it has been supported on the authority of Eydenham, Van Bijlert, Seysen, and many others. Equally eminent physicians, who have maintained that diabetes in its very essence possesses a specific contagion.
Sedoms in his treatise upon the health of soldiers remarks, "The Venereal attack great numbers at its first appearance" his statement we feel very much inclined to think argues some other cause than mere contagion. Again Sir Sомерs medical suggestions for the treatment of dysentery he says "the atmosphere of a crowded hospital unless very frequently changed and renovated by ventilation soon becomes loaded with human effluvia and generates the contagion of typhus. The patient labouring with dysentery are highly predisposed and susceptible of infection under such circumstances and often fall a sacrifice to the double infliction." The presumption then seems to be in favour of its not being contagious although in the case of armies encamped in the neighbourhood of low marshy grounds where noxious inhalation and vapours evict the malign influence or where unwholesome food or bad water are only attainable, it has been known to prevail epidemically. Indeed whenever it makes its appearance in such or similar circumstances where large bodies of persons are crowded together it ravages are sometimes so tremendous, its victims so numerous, that they may well justify a account for the belief of its contagious properties. Also when we look into the history of the disease and its different lesions, to its reappearance amongst ourselves in this country from time to time being
the same character it had 200 years ago, there seems to be a
strong reason for believing that there is something specific
in the nature of the dysenteric poison just as in typhus
or typhoid fever. Amongst mentions that within the space
of 5 years not less than 4000 persons were attacked during
the hot season in Bengal; and during the seven month
clay of the 30th Regiment in India 470 men were seized.
In the year 1897 the madras army lost 515 men, similar
epidemics to those happening in different parts of Europe
have been mentioned by cuvetin, merton, springle and
many others whom we might quote. Dever in referring
to the epidemics occurring in hot climates and
military campaigns says "that this fact of itself does
not argue that dysentery is propagated by contagion"
for the prevalence may be accounted for partly by the
application of the same causes of disease to a number
of individuals together. This writer seems to entertain no
doubt as to its contagious properties for he says in
another part of his book "Patients and attendants may
be seized with bowel complaints from a pollution of the
air caused by wounds, bad ventilation and other cause,
distinct from dysenteric effluvia, but that the effluvia
of both "diarrhoea and dysentery" certainly have a peculiar
tendency to produce a morbid affection of the bowels."
Dever though believing in the doctrine of contagion, held
that the contagion is contained in the perspiration or is propagated by being absorbed by the skin, as Zimmermann would have it, but rather believes that the specific poison is contained in the feculent stools and operates in the form of inhalations, which affect the mucous membrane of the anus and rectum, or the orifices of nose and ears. He also believes that it may be partly due to the air expired by the lungs and the excretions of gas from the stomach. Having thus briefly considered the word "contagia", we come next to the word "Pyrexia", which defines Bell's definition—"the property of falling dying in a pyrexia has also been much questioned, but the only resolution to the difficult problems we believe to be as Dr. Stark has declared viz., "That genuine and simple dysentery is unattended by idiopathic fever and is never of itself contagious, every other form of the disease when epidemic is a combination of the simple dysentery either with intermittent, remittent or Typhus Fever of which the last mentioned fever is alone contagious." Ballingal seems to be very much of the same opinion, for he remarks, "That the disease as it occurs in India very often makes rapid progress & quickly causes various and irreparable injuries to the intestinal canal before any symptoms (urgent) of pyrexia become either distressing to the patient or conspicuous to the medical attendant."
Therefore, from what has been just stated, it would appear that simple defecation is not necessarily attended by any pyrexia. We shall next proceed to consider the causes of defecation. The predisposing and exciting causes are generally enough known, but as to the proximate cause it is more difficult to arrive at a decision. By some authors it has been assigned to an inflammation of the mucous membrane of the intestines; by others again to structures in the colon or some other part of the intestinal canal. Conclusions arrived at from observing post mortem appearances, but which ought properly to be recognized as effects and not causes—Atrocity and others call it a "dilatation of the bowels" and Lythbam a "febris contuens" an explanation which certainly might be more explicit. Johnson assigns it to an equilibrium in the balance of the circulation, and explains it thus: "the superficial vessels becoming turgid, or contracted, the volume of blood is directed to the intestines, it meets a further check on arriving at the liver, where the intestine or secreting vessels are in a corresponding state of turgor. The effect of this is that phlegma in the Calcar and mesenteric circle is now greatly augmented and febrile symptoms ensue. The perspiration being stopped, a vetricious discharge of mucus and acrid serum is thrown from the extremities of the turgid mesenteric vessels upon the internal surface.
of the intestines, which by this time is a state of irritability. It now says he, that nature attempts to restore by reaction. Thus we sometimes see a partial ill-conditioned sweat upon the surface which is productive of no benefit, while from the abscess an occasional ecchymosis of injected bile showers the irritable intestines into painful contortions and then the tone of the tone and leucorrhoea are insufferable." Zimmerman as we have mentioned above attributed all the tone and ulceration, which occur to the intestines bile and consequently gives upon this as the proximate cause. He may here remark that the want of copious liquid stools and the acidity of the tone and leucorrhoea besides other features serve to distinguish dysentery from diarhoea with which when very severe it is often confounded while the first of these symptoms and the absence of vomiting clearly distinguish it from cholera for which it has also been mistaken.

Before enumerating the exciting and predisposing causes it is necessary to state that it is of the utmost importance that the difference between an exciting and predisposing cause be distinctly understood, as explicit of this precaution has led to much confusion regarding the etiology of this disease.

"Exciting Causes." The most frequent exciting causes are those states of the surrounding atmosphere by which the temperature of the surface of the body is apt to become
suddenly and to too great an extent supposed. These atmospheric states consist of lowness of the temperature of the air, and also on account of its containing much moisture. Of course these states may be one much favoured by the person or persons exposing themselves imprudently. Again failure in diet and the use of unwholesome food both under individuals more susceptible of the disease. Amusely places amongst the exciating causes fecal accumulation in the large intestine, the presence of which he says is very often the means of exciting the malady. From this assertion Dr. Morehead and Mr. Jinnon differ, indeed so much so, that they doubt the frequency of fecal accumulation as a pathological state in India. Dr. Morehead is also very desirous that investigation should be made as to this point, so he says the idea of fecal accumulation has been the cause of much injury, by practitioners giving to their patients large doses of mercury and other purgatives in the purpose of clearing out the intestinal canal and thus getting rid of the offensive material.

II. Pre-disposing Causes. It is evident that before we can rightly appreciate the exciting causes, we must first inquire into the habits and constitution of our patient previous to their attack. The European for instance who first lands in a tropical country, experiences the great difference between the temperate climate of his native land
and that of the one he has just adopted. His constitution is just as yet adapted to the warm climate and consequently he must suffer much from the exhausting effects of elevated temperature or from the adaptation of food and habits to the altered assimilation and elimination of the climate. All debilitated states predispose to the disease and when this is strong the exciting cause may be very slight indeed in its nature. The most frequent form of cachexia is that which is brought on by having lived much in malarious districts and from having suffered from malarious fevers. Various other causes (predisposing) may be enumerated such as excess in the use of wine, spirits, liquors or tobacco. The use of impure water, fatigue and privation and diseases of the liver and spleen.

Therefore these causes are taken into account it can be easily imagined how soldiers on actual service and in their everyday life being exposed to such injurious influences suffer as much from this 'de facto' army disease - "Symptômes" - as whatever way acute defecating or as Bellingal terms it Colonitis may be excited. It generally commences with symptoms somewhat similar to a common diarrhoea. These however vary according to the part of the intestine affected by the inflammation but in the issue forms the entire canal almost is implicated. It generally commences with a relaxed state of the bowels, thin feculent stools accompanied by severe griping pains and uneasiness in the region of the abdomen.
At this stage it is generally supposed that the intestinal mucous membrane is only slightly increased in vascularity and as this goes on increasing the symptoms of the acute disease begin to show themselves more distinctly. The frequent calls to stool attended with loose discharges produce in the unfortunate a most uncomfortable feeling. The pain which before was only gripping becomes now very severe and of a shooting or cutting character accompanied by a sense of heat about the rectum and pain extending up into the hypogastrum. These symptoms all increase towards night and early in the morning, leaving behind the sensation as if there still remained something more to be expelled. The faeculent stools present various appearances and differ much as to their consistence consisting sometimes mostly of clear mucus more or less tinged with blood, at other times mixed with these bloody mucous discharges there is more or less faeculent matter which is generally thin and of various colours, being sometimes natural and at other times greenish and of a gelatinous appearance. Again we may have them assuming the appearance of a slimy oil paint which are of different colours, greenish, yellowish, and streaked with small patches of blood. The latter kind of stools are passed without much inconvenience. Dr. Morehead seems to lay great stress upon the diagnostic value of these different kinds of stools, for he says "they all indicate that the inflammation has"
not passed on to its advanced stage." He adds further that if the evacuations are of the first-mentioned kind viz. if the stools consist of thin mucus tinged with blood and are preceded with much tinesmus, then they proceed from the lining membrane of the rectum and lower part of the bowel, and is wholly unconnected with the small intestines. But if the stools be copious and mixed with their feculent matter and passed with little tinesmus, then it shows that the greater extent of the large gut is affected, because along with these discharges more or less of the natural secretion is passed. With regard to the frequent gelatinous stools mentioned by various authors, he seems to view them more in the light that they are caused by the excessive use of eliminant, them being the true symptoms of the disease—while here discussing the subject of stools, we may as well mention a very common, if not invariable characteristic of the dysentery of this country viz. the occurrence of kephala. The future contrasts the dysentery of this country, very remarkably with that of the tropics—Ballingal and others have stated its rare occurrence in tropical dysentery when kephala do occur even more head, it is only in that form of the disease in which the bowels are at first constipated and then become relaxed, and when there is a feeling of fulness in the course of the large intestine followed by mucus and scanty evacuation—The pain in the region of the
Colic which has been mentioned is generally present when the tenesmus and tenesmus are violent - Practitioners ought to be very careful in diagnosing the proper nature of this pain as it may be due either to partial or true peritonitis, the former resulting from inflammation of some neighboring tissue or organ - the latter indicating that the case is one of very great danger, and most probably arising from a bloody condition of the mucous membrane of the bowel which may finally terminate in perforation - sooner or later the evacuations become more frequent and less copious and consist chiefly of mucus and blood which the soldier terms "bloody slime" - Mcleod declares these symptoms may be true enough when the sigmoid flexure and rectum are affected, but when the inflammation is situated higher up then this, as in the case of Indian dynasty, these symptoms are not so prominent. The more general symptoms commence with a whitish coating on the tongue, which when the disease advances becomes very red and glazed. In the early stage the heat of skin, or symptomatic fever is but very slight or altogether absent, even when the disease is in its acutest form - In other cases again we may the recurrence of chills and in a short time the skin becomes parching hot or covered with profuse clammy sweat, the pulse being sometimes only very slightly quickened is full bounding and gives a peculiar thrilling sensation to the finger applied over it - The evacuations are now frequently passed involuntarily and have
a peculiar intolerable state, also having the appearance as if mixed with sheets of mucous membrane and quantities of purulent matter. Dysuria and retention of urine are very frequent concomitants of the acute form, and may be either due to the irritation going on in the rectum or from inflammation of the mucous covering of the bladder causing paralysis of its muscular walls. In some cases Prolapso Ani takes place, and some part prolapse of the mucous membrane of the intestines (to the extent of several inches) have been thrown off in a state of putrefaction. Recoveries have been known to take place even after the disease had advanced to this stage, but more frequently the pulse begins to sink, pain ceases, delirium sets in along with distressing vomiting and hiccup, and at length death closes the scene and relieves the sufferer from his wretched existence. These then are the general symptoms, but of course they vary according to the treatment and other circumstances, such as age, constitution, season, habits, and the force of previous causes. When the disease is accompanied with high fever this affords a strong presumption that it is not simple, but complicated with some of the malarious fevers more especially the Remittent form. When the evacuation contain large quantities of dark coloured bloody matter they constitute that form of the disease to which authors have given the name of Haemorrhagic. This form generally coexists with a gangrenous state of the bowels or with disease of the liver, especially Cirrhosis.
Remarkably may and does exist without elevation where it appears to be buried through the walls of the intestined bloodvessels of the intestines—what has already been said regarding the circumstances which regulate the severity or mildness of the symptoms applies equally to the duration of this disease. It may terminate either in perfect health or in death in from 3 to 15 days, sometimes in from 7 to 15 and again it may be twice as long but this very rarely. When death takes place rapidly, say more than we may assume that the inflammation has been irruptive in character and has led to intense gangrene of the mucous membrane, while on the other hand in those by whom these several stages have been passed through more slowly we may infer that the morbid state has been thickening, involution, gangrene and sloughing of the transverse or other shaped patches of membrane.

Having now given a short and imperfect sketch of the acute form, we come next to consider the Chronic.

"Chronic dysentery" as it has been called by Ballingal and others the "hepatic flux" may be either the result of an acute attack or be chronic from the commencement. This form (says the author just mentioned) is peculiarly incident to men who have lived for some time in a warm climate, and who from habits and constitutions are less liable to inflammatory attacks or diseases, but are more prone to irregularies and dis-
orded secretion of the bile. Europeans returning home after a long
sojourn under a tropical sun, are very often the victims of this
form of the disease, which proves itself to be one of a most
untractable and unmanageable nature. This like the acute
commences like diarrhoea, the other symptoms only varying
in degree from those of the acute.

"The sufferer says William Scurfuson presents a spectacle of
diseases of so pitiable a kind as can be found in the history of
human misery."

After the diarrhoea its character is itself by frequent and severe
fits of griping resembling colic pains, near the umbilical
region, each attack, of which is succeeded by a call to stool.
The evacuation from the very commencement are generally of an
unnatural colour varying from the darkest icky hue to the
different shades of green and yellow sometimes these colours
appear alternately. The stools may also present a frothy appearance,
when this is the case, the discharging of them is accompanied by
the passing of a copious quantity of flatus attended by a sensation
of calcing about the anus. After each call the patient feels
considerably relieved and hopes to enjoy a long interval of repose,
but alas the recurrence of the griping and rolling of gas in
the intestines (the latter being quite audible) succeeded by an
other summons to stool gives the unhappy patient but little
remission despite its very distressing are these calls that Ballingal states
that it is anything but uncommon for the soldiers who are
attached by this complaint to carry a mat with them to the water closets and to pass the night there instead of running backwards and forwards to the barrack-room. From the commencement the patient complains of a more or less uneasiness, loss of appetite with great thirst and bad taste in the mouth. Tongue furled and occasionally covered with a yellowish mucous crust. Pulse quick and the skin parched and hot. After these symptoms have lasted a day or two the stools become whitish in colour and mingled with portions of half undigested food and are passed with great straining. This is what the soldier calls "white flux". The griping pain still continue with permanent oppression about the epigastrium. The nausea and loathing for food accompanied by hiccupp and bilious vomiting are very troublesome. This constant hiccough and vomiting are very annoying as generally food and medicines are rejected almost immediately after they have been swallowed. Thirst becomes urgent. The weakness and languor increase. Pulse quick and the skin becomes of a peculiar greasy feel. Under these symptoms more or less modified by constitution and local situation, the patient may continue to labour for weeks and months, and if they do not directly prove fatal, they at all events irreparably injure the constitution and waste the remaining strength by its long duration. When it proves fatal, it generally does so by the formation of an hepatic abscess or by ulceration and mortification in the course of the colon.
Morbid Anatomy. It is a curious fact and one concerning which nearly all authors agree, that though the topography of this country varies so much from that of India as far as symptoms are concerned, yet that the morbid changes are very similar. Chmel and his disciples believed the local lesion to consist in simple congestion and infarction of the mucous membrane, especially in patches of some extent so as to form patches of some extent purple or red prominences from the surface of which the epithelium was detached. Cruvelhier again believed to consist of an exudation, inflammation of the large intestine which was speedily followed by ischaemia, and he deems that the follicles and solitary glands have nothing to do with the disease as he says "It is not a follicular inflammation." Rokitansky includes both of these forms as being essential, and that the disease as described...
by those writers who have been mentioned, is looked upon as a process of rapid inflammation which being at first superficial leads on to exudation and mortification come a later but is undetected by any special lesion of the solitary gland. Rothstein also states "that even in the very slightest variety of dysentery the mucous membrane is red and swollen and may be removed in the form of a pulp from beneath the serous and vascular epithelium. In the after stage and in the linear forms the mucous membrane becomes glutinous and is scarcely separable or it passes into a state of phagocytosis, thick, friable and offensive."

These different statements are anything but satisfactory and it is to be feared that things would have remained long in this state, had it not been for the careful observations of Dr. Parkes contained in his treatise on the dysentery and hepatitis of India - the observer pointed out that the glandular apparatus of the large intestine was very early implicated in the disease, and that though ulceration occurs very rapidly, yet a case never presents true dysentery symptoms unless ulceration is present. After investigating in 1843-44, 50 cases of dysentery in Europeans and 20 in Asiatics he arrived at the following conclusion:

1. That certain alterations in the glands of the mucous membrane of the large intestine, and sometimes in the ileum constitute the earliest lesion in dysentery.
2. That in all cases when to far advanced, the mucous mem-
brane presented the appearance of numerous white-
point elevations of a size varying from that of a milli-
head to that of a minute that a lens can only show the lesion.
The elevations were hard and being pierced gave forth a
white secretion, many of these had a black spot in
the centre and were surrounded by a vascular circle.

3. That the excitation sometimes occurred in point beneath
the mucous membrane, that each point had a whitish
appearance with contents like those of the solitary glands.
When the mucous membrane was removed an ulcus remained
The roundish elevations seen by Dr Parke have been confirmed
by others such as Dr Craige, Cheyne and Abercrombie, as
also the softened state of the mucous membrane and ulcers
which seem to be nothing more or less than the result of
inflammation of the solitary glands, and which appear
after the sloughs have separated. In John Pringle and
Proust's describe the same appearances seen in the
deficiency which occurred during the continental war,
and they have no doubt but that the ulcers of the
large intestine originate in the solitary glands.

Mr. Watson, Baker, Stack, Hunter, Baillie &c all sub-
scribe their testimony to the presence of these minute
points, tubercles or points (as they have been variously
designated) in all their post mortem examinations.
The tubercules are not seen however in the Camp boarding of 1740, but in nearly every case of the London boarding. The hard partule seem to be (as before mentioned) the mucusorous follicles enlarged and indurated and hypertrophiied by inflammation. Hunter in his observations made in Jamaica makes sub that these partules are true partules although they contain no purulent matter. He describes them as seated under the villous coat, and that each partule is at first small red and rounded and about the 7th open inch in diameter, and that it generally enlarges gradually until it attains the diameter of a 1/2 of an inch. At this stage a small crack with a slight depression appears on the top and gradually enlarges. The contents scene now to be cheese like, as the opening enlarges the edges become more prominent and matter tinged with blood oozes out from it. Such is the progress of one partule, but numerou are aggregated together so that they coalesce and form an extensive ulcerated surface. The general appearance found are the following; on opening the Abdomen very often a quantity of serum will be found collected within the cavity, but this depends upon whether there has been peritonitis or not. A lesion very seldom absent especially when ulceration has gone on to perforation. Theomentum becomes greatly diminished in size, frequently however it is much thickened and interpersed with numerous deep tinged with blood of a dark brown colour and is very readily torn. Because of a Chronic nature it is found thick and
transparent and totally devoid of fat—sometimes it adheres with
great firmness to portions of the intestines being the means
occasionally of closing up ulcers. Slight of intestines are also
found frequently attached to one another and sometimes
to the Liver and Bladder. In many cases however the small
intestines are perfectly healthy and in others again there
may be small inflammatory patches, but perhaps this
inflammatory appearance may have proceeded from various
disturbances acting from any active excitant state of the
vascular system—in rising up the small intestines great
collections of Lumbrici have been found, but this circumstance
is so very common in many diseases, that it cannot be
looked upon as forming a part of the morbid changes found
in dysentery. The Duodenum has been found on some
occasions to have its inner coat covered with a viscid, gummy
demifluid substance of a yellowish or greenish colour. This
often contains small quantities of fecal matter of a bright
yellowish colour and having a certain degree of consistence
sometimes the lining coat is very red and the peritoneal one
black. The Cocoon is generally distended with air, and the
whole Colon and Rectum contracted as may be seen from
the cases recorded by Baker, Charleston Wallaston.
Though these are the general changes preceded by the small
intestines yet authors are agreed that the large and not the
small intestines are the true site of the disease. It is, therefo
in the Colon and Rectum that we may expect to find the most striking deviation from the normal state. Some portion of the Colon may frequently exhibit externally a slight inflammatory redness, while the other parts are only marked by the highest degree of lividity. In the Epidemic which occurred at Dublin in 1825 the mucous membrane of the Colon was very commonly covered by large masses of lymph, ulcerations were also very common and serous fluid generally effused into the peritoneal cavity. The Colon generally never contains any cellular matter or desquamation but is coated over internally very frequently by bloody looking mucus, on the removal of which may be seen the numerous hard tubercles which have been mentioned. These tubercles being in some places small round and red and in other places broad, furred and elevated. The Rectum according to Bremner is in some standing cases much inflamed and contains plenty gangrenous and also possessing tubercles. The same author also describes the Colon and Rectum as being occasionally covered with black or livid spots of various sizes which were caused by the extravasation of black blood into the cellular membrane and which generally in the midst of each spot there was more or less erosion of the villous coat and that the villous coat on the spot looked fine transparent and firm, though the cellular membrane was black and inky. In the small intestines none of these erosions were seen but only here and there red spots of inflammation.炫性 on the other hand
ultly, declares that this ulcer occurs as also modification of the
villus coat: The black colour described by Pringle as being due to
extravasated blood, he (Hunter) attributes it to commencing gangrene.
The large intestines when handled feel thick, hard and fleckly.
In addition to this, Maxmillian Stoll says: "The colon, especially
the transverse part of the arch and the rectum were of a leaden
or dull red hue, the mucous membrane being of a foul or dingy
red colour with blood neither removable by washing or sponging
and the meconium tinge with extensive lesions. This disease
of the meconium Dr. Craigie thinks to be due to the process of
elementary decomposition and indicates the commencement
of gangrene - the same author remarks that gangrene of
the mucous membrane of the rectum may occur in the acute
form of defecating but that it happens very rarely. The appearance,
which have been just described are evidently the effects of
inflammation of the mucous membrane of the colon and to a
small extent of the rectum and also slightly of the small
intestines. There is seldom any alteration in the appearance or
structure of the stomach - At one time it used to be an universal
opinion that defecation was always connected with a vitiated
state of the Bile or with active disease of the Liver itself.
This opinion was held by Zimmerman and others. But
nevertheless while the diseased appearances are so remarkable
in the intestinal canal, yet the Liver is frequently found healthy
or perhaps sometimes slightly altered in colour without any
change of structure. Abscesses are sometimes met with, but these are concomitants of the disease. The gall bladder has its coats occasionally thickened and the bile itself is slightly increased. The conclusion we may arrive at from the foregoing remarks is that there are two kinds of inflammation which may affect the intestinal mucous membrane. The one being spreading or continuous attacks the mucous membrane in general, is very acute, and gives rise to thickening and ulceration. From this the acute form originates and not from the hepatic derangement as formerly thought. The other kind of inflammation is more chiefly confined to the muciparous follicles of the colon and forms the chronic defluxion.

We come next to the consideration of how we are to combat with this terrible enemy of the European of the tropics. This part of the physician's duty is one of anything but an easy nature, but indeed one which will both try his wits and test his professional knowledge. "Ut alimenta satis copiosius, agricultura sive sanitatem agris medici exposita" says Celsius, and we find that in this disease less than any other is there room for the favourable operation of what is technically called the "his nutritur natum." It is very seldom indeed that unaided efforts to create a reaction are successful but on the contrary an increase in the severity of the symptoms is the result, as has been already shown in a former part of my paper.

Resolving then that this is the case, it is the duty of the medical
attendant to be prompt in the appliance of those remedies which his art has placed at his disposal. Many practitioners have their own individual cures for different diseases, which they use in every case without varying, looking upon them as specifics.

In order to avoid this pitfall of routine practice it becomes physicians as scientific men to treat diseases systematically and by ascertaining nature rather than by ignoring her assistance. Let us not employ all the modes of treatment which many practitioners, perhaps deducing from false premises have employed, such as the constant exhibition of purgatives, emetics, diaphoretics, mercurials &c. Not that we would pretend to condemn any one of them as improper, but we believe when one of these plans exclusively is followed, made an unvarying rule, a fixed principle to go by, they more frequently result in failure partial or complete, than in producing any beneficial result.

Johnson proposes as his principle "the restoration of healthy perspiration and biliary secretion with an equilibrium of the circulation and excitability." Our own view we would put thus to restore the equilibrium of the circulation and excitability by the diminution of local inflammation. This ought to be done in the acute form. In the chronic strive to restore healthy perspiration and biliary secretion, at the same time not neglecting the tendency to local or visceral diseases. The treatment must, however, necessarily vary according to the stage in which the disease is seen, and the constitution of the patient we have
to deal with. The success in treatment will depend much on these circumstances. Parkehead very judiciously says "that in the early stage the indication is to prevent the reddened and urticated membrane from passing into one of organic thickening, ulceration or gangrene" we must bear in mind that the remedies used in this stage are very injurious when used where the tissues begin to disorganize, in such cases the cure can only be effected by processes of repair. Therefore the means we must employ are those which will effect this purpose. It must be also remembered that the treatment of the dysentery of this country is different from that employed for tropical dysentery. The various remedies which have been recommended and adopted are the following: I. Bloodletting, general and local. II. Mercury. III. Purging. IV. Opium. V. Astringents. VI. Diarrhoeics. VII. Activating.

I. Bloodletting. This remedy is mentioned first and foremost by every author as being the most important measure to be employed. The practice must, however, be regulated in this respect by the condition of our patient. In cases have occurred where it has been carried to excess. Indeed it often happens when the disease has gone on to an advanced stage, patients will sink under an amount of depletion, which had been performed earlier would have been productive of the greatest benefit. It has been recommended by many writers that copious rectifications should be had recourse to as early as possible in the colicky and shitting,
While leeches should be applied in the motions down and dilated, Dr. Kayne remarks that the withdrawal of about 18 ounces of blood (often by cupping) often renders the abdomen less tender to the touch, and immediately alters the character of the stools, (and what is interesting) after purgatives have failed, the patient perhaps in day's having had nothing but mucous, or semiquimulant stools, a large faculent stool was not infrequently passed. It is the opinion of Dr. Martin, that a sufficient abstraction of blood by venesection practised at the very onset of the symptoms will simplify and render easy the subsequent stages of cure. He recommends moderate depletion from the arm to be followed by a full dose of Colonel and James Powder, with a hot bath or warm fomentation to the abdomen at bed time. An aperient in the morning to be followed during the day by enemias conjoined with diuretics, the only circumstance allowed being demulcent drinks. This course of things will bring about convalescence in a few days. Important though bleeding may be when used discriminately it must not be inferred by any means that it ought to be employed in every case, for there are many cases of simple debility which are quite curable by more lenient means such as rest, prudent evacuations, opiate and abstinence. The warm bath also seems to be in great esteem as it not only allays pain and promotes sleep and rest, but along with opiate injections alleviates the distressing dysuria. Compression to the abdomen may also be had recourse to either by means of blisters or by the application of hot spirit of camphirin.
M'Cormick remarks that flannel wrapped in of boiling water and sprinkled with turpentine or camphorated spirits and applied seek hot to the whole abdominal surface has proved extremely useful. To this M'Cormick adds "the attendant should be particularly cautioned to watch the heat of the extremities and to apply hot bottles to the feet when necessary."

Arsenious, Acetate of Lead and Sulphate of Copper have all been recommended, the former having been said to have proved excessively beneficial even in cases where there were most extensive ulcerations in the intestines and after every other remedy had failed.

Culling speaks of it thus: "However highly I may be disposed to think of this remedy in the chronic or advanced stages of this disease, I have never been able to see the benefit of its application in the acute inflammatory affection of the colon." Its use was thought advisable under the impression that defunction was dependent on whatever condition of the liver, but as we have been, this is not the case it would be decidedly wrong to prescribe it, at least in those enormous doses which used to be in common. For instance, it was not uncommon for an individual to swallow

...
administered by such quantities as from 500 to 700 grains. Such practice as this may truly be termed an abuse. Johnson declares, the exhibition of the subnumerous of mercury in temple doses twice or thrice daily, without any other medicine to be unproductive of griping or hypocrastaries, but on the contrary invariably relieved the terminus and tinesias and lessened the desire to go to stool, bringing on salivation sooner than any other plan of smaller or less frequent doses. Such practice as this by producing salivation might possibly have some benefit on the inflammation of the mucous membrane, but its action is too obscure besides being doubtful to be relied upon. Even these doses often fail to produce salivation and when they do produce it, the patient frequently dies in consequence of being suddenly im-ajoned. Others again continue this medicine in small doses until salivation occurs, and when it has occurred, it is to be kept up as possible until the natural secretions return and the stools assume a healthy color. Morehead condemns this kind of treatment and declares that as a general method, Calomel is altogether unappetizing and most commonly injurious. He further adds that this drug is seldom required in the treatment of Indian dysentery. Ballingal also remarks that he never heard any good reason assigned for the profuse salivation which many suppose to be necessary, while the elation and debility of the patient partly induced by the medicine, and partly by its rendering him unable to take the little sustenance to which he might otherwise be inclined, seem
my strong objection to the practice of salivation. Yet we have the testimony of many experienced and trustworthy writers of its benefits; a testimony indeed which we cannot altogether reject. These same authors however as Bell ingale states are unable to explain its modus operandi at least in a manner sufficiently satisfactory to an enlightened modern practitioner. For those who put their trust in mercury the saying "Causa latet res latissima" is the easiest way of getting out of the difficulty of giving an explanation of its action. For those on the other hand who prefer to treat upon sure and known grounds the best plan I think would be to leave mercury as a "desires resort" except in the shape of small doses of Calomel combined with opium which plan has been strongly advaized by Martin and others. This method we should however prefer in cases where the dysentery was accompanied by hepatic derangement. It may be proper in some cases to give an emetic though not required on account of nausea or loaded state of the stomach, for this combination perhaps with other remedies may serve the purpose either of clearing out the intestines or of promoting diaphoresis.

"Spermacanthus" is generally preferred by all as an emetic, but some use Potash and Tart of antimony, but the Spermacanthus being milder and more agreeable and less sedative ought to be employed in preference. This drug is one of the most important along with opium which we possess in the treatment of dysentery. It was first brought from the Brazils by Odo Tomaro at the end of the 17th Century and was
used by him in this disease in the form of an infusion given in 3d doses. Sir John Pringle gave it sometimes in small and at
other times in 3grain doses at intervals of 2 or 3 hours. Haspel
combined it with Calomel. The efficacy of Spermacanthus is
thought by some to be due to its nauseant and diarrhoeic effects,
other such as Sir John Pringle think it due to its laxative and
purgative properties. Combined with opium it has been of great
service in the early stages. Macleod prescribes it along with Blue
pill or Extract of Gentian, this he says has been productive of
the greatest benefit in advanced and cachectic cases. It is
a curious fact that Spermacanthus has seldom been given up on
account of its nauseant effects as the system seems to have a
tolerance for it in defecating. The administration of it ought to be
followed in the morning by a purgative such as Castor oil, which
must be repeated every 3° or 4° day as natural feces seldom if
ever pass down easily by such artificial means.

II. "Purgatives" in every form of the disease are essential for a cure
although this implies to some cases more than others. Great care
must be taken however that their use be not carried too far, the
mischief will be the result. The object to be held in view in em-
ploying purgative ought to be to produce and keep up a full and
free discharge from the intestines, but at the same time causing
as little irritation as possible; and should irritation be set up
ought to be checked at once by hot fomentations, cataplasms and
hippiate. Bitters and efficient Clysers may also assist in achieving the toned
in
but there are objections to their use for if too frequently employed increased pain, languor and exhaustion result, besides they are seldom of any service. The next endeavours must be to prevent a return of the tumours and tumescence and to determine the circulation to the surface of the body, by giving small doses of some diaphoretic mixture which may be administered every 3 or 4 hours so as to produce and keep up quite perspiration without exciting much nausea. The best medicine for accomplishing this end is the Antimonial powder combined with Opium. By the employment of such remedies the progress of the disease may be arrested, and by careful regulation of the diet the patient will soon be restored to health. The duty of the doctors varies from that of this country in nature and symptoms, so the treatment must be different. Mercury is more used abroad than here although some have praised it highly. Hyoscynium has been prepared by some to Opium. Dr. Thomson says in regard to it, that by its analagous and gentle laxative properties it seems a medicine well adapted for this disease and it may be employed when Opium is inadmissible. Warm baths, hot fomentations and diaphoresis are all used but not so much as they ought to be. In chronic diseases Opium is nearly always necessary. It cannot however be deemed an infallible remedy, for perhaps strict attention to diet, the warm bath and the common rules of hygiene will do more towards securing them all the drugs of the Pharmacopoeia. Mr. Scott advises that small quantities of
light digestible food should be allowed at each meal and that
the patient should not eat oftener than once in 3 or 6 hours.
This method he says proves successful. He recommends also
mutton broth boiled in milk, which is to be strained immediately
after being taken from the fire, sugar and rice being added to
make it more palatable, if this may be given once or twice
daily if the patient's stomach will bear it. Arnica tincture upon
thistle, and nitrominio acid lotion, with Opium Emmulac, and
good doses of powdered nitric acid internally. Sulphur and
Charcoal have been tried, but neither of them have been
of any use. Nitric acid in 3/4 doses per diem in barley water has
been praised in some cases; this may be followed by Cassia,
Columbus, Cascara in other tonics— with respect to diet, ripe
fruit will be necessary in the early stage, but should be
avoided in the more advanced stages, especially if any marked
acidity of the stomach seems to prevail. Every sort of food which
readily leads to an overactive putrefaction ought to be avoided
throughout the whole course of the disease. Fermented or
spirits drinks should be forbidden, but when the patient is
in a state of convalescence, port wine or even a moderate allowance
of brandy diluted with water may be given. To support the
patient's strength preparation or barley, rice, sage, flour or arrow
root boiled in milk are the most proper means, they may
be raised sometimes by substituting gelatinous soups.

Dr. Baker says he found nothing of so much advantage in the
Decline of the disease on the preparation of corn on the boiled with fish and to which some starch had been added, he also observes that melted butter is a remedy which has been long employed by the Irish for dysentery and is therefore probably not without its advantage. There is an important remark which might be made here, and in the words of Johnson himself viz. "When convalescence takes place the appetite too often outstrips digestion, and so do the expectoration and exsanguination exceed the various operations body to reassert a dangerous equilibrium between assimilation and secretion. The consequence of which is that the weakest viscera is that which has suffered most during the previous illness becomes overpowered and a relapse ensues. He adds, "this is the great error of inexperience and it is generally seen too late." After this it is scarcely necessary to say that the precautions of being warmly clothed (wearing flannel next the skin, especially) guarding from exposure to cold, wet, damp air or sudden changes of temperature, it will be in the highest degree necessary to pay the most scrupulous attention to diet. Persons recovering from dysentery should always exercise the greatest precaution and regularity in their mode of living. There is another circumstance which requires notice and likewise remarked by Johnson viz. "as little bitumen in the mucus and blood come away at stool in four out of five efforts we should endeavour as much as possible to stifle the desire to pass feces, and we shall certainly very often succeed." For the turbericia goes off in a few
leaves and by these means we escape the painful tenures which continue so long after every fevers's sedatives to evacuate.

If sedatives be paid to every case of nature. The straining which ensues is highly detrimental and in many cases augment the discharge of blood. Every motion of the body indeed increase the desire to go to stool. Like most other diseases, dejecting is often forming complications which require modification in its treatment and sometimes creating difficulty in its diagnosis. We shall however only briefly enumerate the more important complications:

The chief disease we find it associated with are Remittent & Intermittent fevers. It is this complication (as before mentioned) which led authors to term dejecting a "Pyrexia" mistaking the complication for a symptom of the actual disease. When it assumes the Intermittent form, the symptoms of dejecting appear in paroxysms, and disappear or are much alleviated when it goes off; when of the Remittent type the dejective symptom increase and abate with every exacerbation and remission.

Bozio says "when the disease terminates early in death, the fever has not disappeared but assists in producing the fatal result. In other cases he says the departure of the fever is evidently marked, generally in 14 to 20 days, leaving the dejecting uncomplicated behind it." Similar occurs when an intimate connection exists between these disorders, the one frequently changing into the other, and both often complicated with various degrees of violence. The pulse is often 104 in the morning, increa
towards the evening, face flushed, the extremities cold and the pain periodically appeared. This fever generally sets off in about 8 or 10 days, if the case does not terminate fatally before that. If the complication be with intermittent fever the della must be attended to first and vice versa if with remittent. In some instances, diarrhoea and vomitings are to be applied in the former to be followed by tonics such as quinine and cordial. In the latter (with remittent) if we use Cinchona the fever will be removed, but the flux will remain unaltered, in such cases we must treat it the same as simple acute dyspepsia, copious drinking of warm water or whey and the use of ripe fruits seem to be serviceable. The regimen says Clark ought to be much the same as in remittent fever and when the disease is accompanied by putrid symptoms nothing will be found so useful as ripe fruits. The combination with dysentery is by far the most important and dangerous form of the disease, it is the true "Pyrexia Contagiosa" of Cullen but described by him as simple dyspepsia. It may be recognized by the symptoms of dysentery: fever, rigor, nausea, vomiting, great prostration. The pathognomonic signs easy Zimmerman, are the quick approach of more than natural weakness, great anxiety about the pit of the stomach, a heaviness in the head, a wild and at the same deathlike look, spirits extremely depressed, frequent convulsions, weak voice, after fainting fit, a military eruption, petechiae and a very feeble pulse. The account given of it by Clarke who met with it in Bengal is in The following words:

-
"The case, in the most part withlassitude, slight rigors, disordered stomach along with bilious vomiting, at first exactly resembling the simple fever, but the paroxysms did not run so high, and the patients were not so apt to rave. In a day or two sometimes latter the dysenteric symptoms made their appearance and were attended by the greatest prostration of strength. If there had been any delirium in the fever, they now disappeared; the skin continued hot, pulse quick and judder, tongue very foul and frequent hiccup. If the disease was not speedily checked, the symptoms were daily aggravated, the tongue became black, and the body covered with a black tenebrous shine. The frequent frequency of the stools induced excessive weakness and the countenance was ghastly. On modification setting in the usual symptoms occurred in all the patients; at this period subtilissimum, tumors, delirium were added. Some had pustules on various parts filled with ichorous matter which degenerated into black putrid ones. The disease was often fatal in a few days." He goes on further to remark that the dysentery seemed rather a symptom of the fever than the original disease.

As before mentioned this seems to be the only form of dysentery where contagion exists, and this property does not result from any virus specific to dysentery, but merely from the fever. The treatment required is identical to that used in malignant fever. Resurrection is of course inadmissible and diaphoretics, purgative. Mercury is of no advantage. Above all things
pure air and cleanliness are necessary, without this all other
remedies are useless. Warm baths and fomentations may possibly
be good, but with regard to the latter Dr Cawie says "I tried the
lithic effusion in a few cases and though with abstention of
heat yet with no lasting benefit." The patient complained of the
fatigue of moving and of the chilling effect of the remedy, which
was therefore abandoned. Parch, supputation and other constric-
tions are remedies likely to prove highly serviceable, and the form
of dextrose is peculiar in as much as it requires the free inhalation
of grain cordials, tonics &c. The remarks on this complication
may be concluded by referring to Zimmermian's statement that
"when the patient's pulse sinks, his strength begins to fail and he
himself oppressed and anxious, the disorder then requires all the
remedies which are necessary in malignant fevers."
Syphilitic may sometimes be complicated with arthritis,
pericarditis, gangrenous arthritis &c. under these circumstances the
treatment must be modified according to the predominance of
one or other of these affections.

Edw. H. C. 1841.