AN

INAUGURAL DISSERTATION,

ON

Pneumonia

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BY

S. N. BURKE

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CHARLES W. SMITH,
BOOKSELLER AND STATIONER,
NASHVILLE, TENN.
To

The medical Faculty
Of The
University of Nashville

To whom he is indebted for so much useful and pleasant instruction, and whom he will always gratefully remember, these pages are respectfully dedicated by

The Author
in the suprapubic region and extending upward or left inferiorly, the other region of the abdomen. It remains to always present. The

**Pentinitis**

This disease, which is an inflammation of the serous sac which lines the abdominal cavity, involves more or less completely all of its contained organs, admits of being divided into several varieties, but I shall consider it under the two general heads of acute and chronic

**Pentinitis.**

Acute Pentinitis. is often ushered in with a chill, but most frequently it begins with pain and uneasiness in the abdominal region. Occasionally, the two phenomena are simultaneous in the period of their occurrence. The pain is sharp and severe, generally beginning
in the hypogastric region and extending more or less rapidly, the other regions of the abdomen. Tenderness is always present. The slightest pressure gives rise to the most exquisite pain, and whatever causes contraction of the abdominal muscles has the same effect. Hence the patient suffers from defecation, micturition or whatever causes straining. He lies upon his back with his thighs flexed upon his abdomen and the legs up on the thighs, so as to relax the back and take off the weight of the bed clothes.

Most frequently the tenderness is general over the whole abdominal surface, but in some instances it is greatest in particular spots, indicating in such cases the situation of the inflammation. From the commencement there is a feeling of tension,
hardness and elasticity in the parietes of the abdomen, and very soon a swelling begins which increases with the continuance of the disease, and towards the close assumes the character of tympaniti. In some cases there is but little or no tumefaction. The swelling when present is generally uniform, but may be irregular, resembling a tumour, or tumours in the abdomen. Percussion in the initial stage of the disease generally yields a healthy sound, but as it advances the resonance increases with the swelling, except perhaps, in the most dependent parts of the abdomen, where the effusion of fluid may render the sound dull. Sometimes a peculiar friction sound is audible when the ear is applied over the seat of the inflammation, and a corresponding den
tation is sometimes communicated to the hand thru reflex. These signs may be the result, either of a dryness produced by the inflammation, or by an effusion of lymph, causing roughening of the peritoneum. just as they are produced by a similar condition of the pleura in pleuritis.

Besides the symptoms already enumerated, there are many more, either sympathetic or dependent on the direct propagation of the irritation to contiguous parts, such as nausea and vomiting, thirst, constipation, pain in the back. The face is pale and contracted, and marked by deep distemper. There is a pinched and anxious appearance of the countenance, peculiar and characteristic of the disease under which the patient labours. The respiration is short and hurried, because of the
pain produced by the movements of the dia-
phragm and abdominal muscles. The pulse
is usually very frequent, ranging according to
Dr. Wode from a hundred and ten to a hun-
dred and thirty per minute. It is small,
tense and even. The tongue is generally moist
and covered with a yellowish fur, but is some-
times dry and red, and sometimes nearly natu-
ral. The chill with which the disease com-
 mences is frequently followed by a fever, which
soon subsides, and during the greatest severity
of the complaint the skin is but little warm-
er than natural.

The progress of peritoneal inflammation is
usually rapid. In severe cases death often
takes place in two or three days, and generally
in about seven or eight. An increase of
pain
tenderness and marks the advance of the dis-
case, but a sudden and complete subsidence of pain often precedes a fatal termination of the disease. Hence a cessation of pain must not be regarded as a favourable symptom, unless accompanied with other indications of improvement. This sudden disappearance of pain in the latter stage of peritoneal inflammation very often marks the termination of the disease in gangrene, and is therefore to be regarded as a fatal prognostic. As the disease advances towards a fatal termination, the pulse becomes frequent and feeble, the extremities cold, and the countenance ghastly. The abdomen is tympanitic, or sunken and flabby. There often occurs a vomiting of dark, or black matter. The limbs sometimes give way, and there is a discharge of the same sort of matter per rectum. In many cases very often occurs before death, or the patient may lapse into a comatose condition, from
which he never recovers. Not unfrequently, how-
ever, he attains the proper functions of his in-
tellect to the last; andamanent dioniesis, or

A favourable issue is indicated by an amelioration of all the symptoms. Sometimes a co-
pious discharge from the bowels, skin, or kidneys marks the resolution of the disease. In some
cases the symptoms entirely disappear and
the recovery is perfect. In others, a greater or
lesser degree of pain continues after the constitution
al symptoms have disappeared. Again, the a-
cute may terminate in the chronic form of the
disease, thereby prolonging recovery.

There are various modifications of Periton-
tis, some of which it will be proper in the
present place to notice. Thus, it sometimes
is circumscribed, affecting a small part of
the peritoneum only. This is apt to be the
case when the disease arises from a local cause, such as inflammation of an invested organ, or from mechanical violence. Inflammation thus propagated from contiguous textures to the peritoneum is not disposed to spread, but affects that portion of the membrane covering the diseased part beneath. The inflammation is less likely to spread when a fixed organ is the seat of the primary disease. The local and constitutional symptoms are less severe in this variety of Peritonitis than those in which the inflammation is more general. The phenomena are also much modified by the organ affected. Jaundice is often present when the disease occupies the peritoneal covering of the liver, the result of irritation extending to the glandular part of the organ. Great pain and tenderness in the hypogastric region, and difficult
ty of micturition, mast inflammation of the serous covering of the bladder. Epigastric ten-
derness, nausea, and vomiting, with great constitutional disturbance points to the serous cov-
ering of the stomach as the part affected.
The right iliac region is sometimes the seat of partial peritonitis. In this situation it
is usually caused by foreign bodies lodged in the cecum or vermiform appendix, or by the
escape of fecal or other matters through perfora-
tions of the coats of that portion of the canal.
When the disease is located at this point, it
is marked by pain over the head of the co-
lon and constipation. It frequently terminates
in death which points either anteriorly or be-
hind.
Peritonitis is for the most part a painful
disease, although it sometimes comes on in
diously without much pain, and runs its whole course without any great disturbance. This form of the disease is most apt to occur in persons of feeble constitutions, and when masked by other diseases (such as inflammation of the brain) that abet the sensibility.

Like all other inflammations, peritonitis is often accompanied by a typhoid state of the system, masked by feebleness of the circulation, soreness upon the teeth, dry and parched tongue, and disposition to hemorrhage from the mucous membranes.

Another modification of the disease incidentally mentioned above, as sometimes occurring in the right iliac region, is that caused by the perforation of a hollow viscus and the escape of its contents into the cavity of the peritoneum. In this case the inflammation is
most frequently general. The phenomena of this type of the disease are usually preceded by some other affections, attended by ulceration of the bowels. It often occurs during the progress of enteric fever. The commencement of the peritonitis is marked by sudden pain at a certain point, which rapidly extends over the whole of the abdomen, indicating the spread of the inflammation over the peritoneal surface. All the symptoms of intense inflammation are rapidly developed, and the patient usually sinks in a few days, often in a few hours. Recovery from this form of peritonitis is rare, but occasionally it terminates favorably.

Another form of this disease occurs in puerperal women, and is called Puerperal
Peritonitis. It is generally caused by a peculiar contagion, especially, in that form of it, which is so often said to prevail epidemically in Europe. But inasmuch as it belongs more appropriately to the subject of midwifery, the author seems it unnecessary to take it into further consideration.

The limits of this paper will not will not allow of an extended notice of the anatomical changes brought about by peritonitis. It may suffice therefore to say in a general way, that the effects of peritoneal inflammation as revealed by dissection are, 1st Increased vascularity and thickening of the membrane & Effusion of coagulable lymph will be found in the form, either of floculi, membranes, banks, or masses, and frequently agglutinating the in-
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Testines together, to the abdominal parites, or to the omentum. 3° There may be effusion into the peritoneal cavity, of various fluids, serum, pus, or blood, and these may be mixed or separate.

4th Modification. 5° Tuberculous formations. 6th Transulations on the surface of the peritoneum.

7th In cases of perforations, ulcers will be found commencing with the mucous, to have eroded and passed through the various coats of the bowel, permitting the escape of its contents into the peritoneal sac.

This brief account of the morbid anatomy of peritonitis, brings us in the next place to a consideration of the etiology of the disease.

Peritonitis may arise from all the ordinary causes of inflammation, such as the vicissitudes of temperature, the use of stimulants, the
exposure of the body to cold and dampness. It is however more frequently caused by blows, falls, wounds of all sorts, and surgical operations, among which may be named paracentesis abdominis and the caesarian section. Sometimes it occurs as the result of other diseases, especially by inflammation of such of the viscera as are covered by peritoneum. Obstruction of the bowel, either external or internal, often gives rise to the disease. It is not unfrequently the result of perforation of the hollow viscera of the abdominal cavity. This perforation may be caused by ulceration, or rupture, or by penetrating wounds. Thus perforation of any of the hollow organs contained in the abdomen, the bursting of an aneurysm, or an aneurysm may give rise to peritonitis.

Diagnosis. When the disease is fully form-
ed, without complication there can be but little difficulty in distinguishing it from other affections. It may be known from gastritis by the supine position of the patient, the greater tenderness, the sharper pain, the greater tendency to constipation, and the greater impregnation which it makes upon the constitution. From inflammation of the muscular coat of the bowels, by the colicky pains of this disease, and the decided constipation. From colic by the great tenderness upon pressure in peritonitis and the parasymptomatic character of the pain in the former affection, and also by the dorsal decubitus in peritonitis. From inflammation of the bladder, liver and other parts invested by peritoneum, by the absence of any marked or decided disturbance of their several functions.
such as would of necessity result from inflammation of their proper substance.

Treatment. In the treatment of ordinary acute peritonitis, prompt bleeding is the remedy most to be relied on. Authors teach us that we are not to be governed by the pulse in deciding upon the propriety or impurity of abstracting blood, as the heart is often, as it were cramped by the violence of the disease. Hence the pulse, although often bowed, is generally small and frequent. We are also taught that it often becomes fuller and more developed under the use of the lanceet, and this may be taken as proof that the remedy was demand-

All circumstances must regulate the quantity of blood to be taken. Age and constitution of the patient, the stage of the disease and the effect produced by the bleeding must all
considerations in determining the amount of blood to be abstracted, that must not be overlooked. The practitioner should in the opinion of the author be governed by effect of the loss of blood, both upon the system and the disease, in regard to the quantity to be taken at any one time; and also as to whether the operation should be repeated or not. In short he should bleed for effect. When faintness occurs, or if the pulse sinks under the flow of blood, we may know that a sufficient amount has been taken for the time being. After the first bleeding mild purgatives should be given, in order to clear out the alimentary canal. For this purpose it is best to prescribe a dose of calomel and follow it up with senna or castor oil. Active purgation must be avoided, but the pre-
once of irritaing fecal matters in the bowels will be likely to produce more mischief than a gentle purgative, besides purgatives have a derivative effect by their action upon the mucous lining of the intestines. But after one full purgation, it is not advisable to continue their use, as by stimulating the motion of the tube they may aggravate the disease. In the treatment of other inflammations, as an inflamed joint for instance, one of the main indications, as universally recognized, is to keep the part at rest, why not then should the same rule hold good in the treatment of the inflamed peritoneum? Keeping this object in view then, after one thorough evacuation, we should be content to produce a very slightly laxative effect upon the bowels by the administration of our medicines. In the
detection of evacuations, such only should be chosen as will be most acceptable to the patient's stomach, and should they prove very disagreeable to that organ, they should be dispensed with and enemas employed in their stead.

After promising one or two large bleedings, and a sufficient evacuation of the bowels, recourse should be had to leeches which should be freely applied over those parts that contain the greatest amount of tenderness under pressure. They should be followed by large and warm cataplasm, which ought also to be light, in order that their weight might not inconvenience the patient. Cold water and frozen ice have been used as applications to the abdomen with asserted benefit. I should think the patient's feelings should be consulted in choosing between cold and warm applications. But care is necessary
In the application of cold, that it may not be carried too far, thereby so retarding the circulation as to produce gangrene.

Opium is admirable early in the disease. The best time to give is at night, so as to procure rest and sleep and to keep the inflamed membrane as motionless as possible. Dr. Wood recommends the combination of small portions of calomel and opium. He directs the calomel with a view to its constitutional effects; or in other words, to form a basis for such an impression should it become necessary later in the progress of the disease. In this the first stage of the affection, refrigerants may be of benefit such as the effervescent draught, which while it allays the irritability of the stomach also determines to the skin, two important indications to be met. If the gastric irritability
be very troublesome it will often be allayed by
draughts of chamomile tea, or by an emetic which
cleanses out the stomach. Analyses may also
be used for the same purpose with a prospect
of benefit. After the disease has continued
for several days and proper depletion has
been made, the cataplasms may be replaced by
subfacients or blisters. In the advanced stage
it often becomes necessary to use stimulants,
and for this purpose ammonia, wine, whey
and other articles of this class may be us-

ed. Sometimes stimulating food may be re-
ecessary. It is needless to say perhaps that du-
ring the active stage of the disease, the pa-
ient should be confined entirely to fluids.
From the long list of farinaceous articles of
of diet which may be prepared in a liquid
form, we may always select some that will
agree with the taste of the patient.

To allay thirst, small pieces of ice may be held in the mouth, and the patient allowed to swallow the water as it melts. Small quantities of iced water, or carbolic acid water, may be allowed for the same purpose. Of course the patient should be kept motionless in bed. At least as little motion should be allowed as possible, andContinuance should be instituted to take the weight of the bedclothes from off the patient's abdomen.

Cases of partial peritonitis should be treated upon the same general plan that the severer forms require, but less actively. When the inflammation is dependent upon perforation of the intestine, the treatment is a little different from that which is applicable in cases arising from other causes. As the
perforation is generally produced by some other
disease that has weakened the vital powers of
the patient, bleeding from the arm will sel-
dom be admissible, but in its stead leeches should
be applied to the abdomen, the number to be
regulated according to circumstances. The great
indication to be fulfilled, is to keep the bowels per-
fectly at rest, and for this purpose large doses of
opium should be given, so as to bring the sys-
tem fully under the influence of the medicine,
and keep it so. What indication do we aim
to meet in the administration of opium? blear-
ly to put the bowels in splints as it were, that ad-
lusions may be formed and the escaped matter
be prevented from spreading. Opium not only
has this effect, but by attaining the general sen-
sibilities, prevents the disease from making so
great an impression on the general system as
it would otherwise do. The patient should be allowed as little nutriment as is compatible with the performance of the various organic functions. Drinks should be given often, and in small quantities. Thirst may be allayed by small pieces of ice placed before the tongue. We would conclude a priori that peritonitis arising from this cause would be a large majority of instances prove fatal, and the meagre list of recoveries on record attest the truth of such a supposition.

Chronic Peritonitis

There are two varieties of chronic peritonitis; the one arising from the ordinary causes of inflammation, and the other from tubercles scattered over the serous membrane. I shall confine myself to a consideration of the first variety.
initio, but most frequently it is a sequel of an acute attack. In the first form the commencement of the disease is often obscure. Derangement of digestion, slight pain in the bowels, and constipation alternating with diarrhoea, are generally present. After a longer or shorter time the general health becomes deranged, a little febrile heat is experienced towards evening, the patient gradually loses strength and flesh, and the disease becomes fully formed. When the disease is the result of an acute attack, the phenomena of the chronic follow immediately after the symptoms of the acute disease. The symptoms of the two forms of the disease are frequently so blended that it is often difficult to say whether the attack was originally acute or chronic. In fact, there seems to be no distinct line of demarkation between them.
When the disease is fully formed there is slight tenderness in the abdomen, which is often not felt unless pressure be made directly over the affected part. Sometimes there is a sense of heat in the epigastrium. There is occasionally transfixation of the abdomen, with decline in percussion, caused by effusion of serum into the peritoneal cavity. Sometimes the effusion is so great as to amount to decided ascites.

The appetite is generally feeble, and the digestion impaired. Food causes a sense of weight in the stomach, and often pain in a particular spot, occurring at a certain time after meals. The state of the tongue is variable. The pulse is frequent, the urine scanty, and the skin dry. The progress of the disease is usually slow. The strength fails, and the patient is gradually worn out by the irritation, and finally
succumbs to the disease.

Treatment. The remedies most to be relied on are rest, leeching, cataplasm, fomentations, warm bathing and blisters. Calomel may be given with a fair prospect of benefit. The state of the bowels should be attended to, consti-
tency obviated by laxatives, and diarrhoea by astringents and astringent preparations. Opium
should be given to allay pain and promote rest. They should be given at bedtime, in or-
der to induce composure and sleep. The di-
et should be regulated according to the cir-
cumstances of each case.