INAUGURAL

DISSERTATION

on

PLEURISY

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By Pleurisy is meant inflammation, acute or chronic, of the Pleurae; and generally both Pleurae, the costal and pulmonary, are inflamed, and both sides of the chest affected.

The subject of Pleurisy naturally divides itself into the consideration of — the morbid anatomy of Pleurisy; its symptoms; its treatment; and its prognosis; its causes and last
The inflammatory lesions observed in the pleuræ, after death are—Reduplication or insiduous collections in the pleural cavity: Plastic fibrous or lymph coating the apposed surfaces of the pleuræ. Adhesions of these pleural surfaces: and lastly, though not an immediate effect of inflammation, the presence of air or foetid gases, in the cavity of the pleuræ, often along with, rarely without, fluid effusion.

Inflammatory reduplication may, on some rare occasions, be noted per se in the pleuræ in patients dying from other diseases with its efficient pleurisy; and it is often to be observed conjoined with other inflammatory lesions. This reduplication, whenever it occurs,
depends doubtfully on the concreteness of the inflammation, and on congestion of their more minute blood vessels.

Serum or Lyd is found in the cavity of the Pleuræ, between the Pleuræ pulmonales and costales, in greater or lesser quantity, in ounces or in pints. The serum is often limpid and of a straw-colour, or like whey: but we often find it is turbid, with threads of fibrine floating loose in it. It may often be sanquisolated but it generally without odor. The Lyd is like the Sud. found in other parts of the body; but it is often thinner, and like the serum without odour, unless there had existed the condition of Pneumothorax. When the
serum or pus exists in large quantity, the pericardium of that side of the chest are found displaced; the lung is seen collapsed and condensed into small bulk around its root, with perhaps a coating of false membrane on its pleura, but in another respects sound; the heart, if the effusion be on the left side, is observed to be pushed very much to the right of its natural position, so that it is often behind the sternum. The chest itself, on the diseased side, sometimes bulges sensibly to the right, and is actually larger than the sound side, by direct measurement.

Lymph or Plasme, fibrine is been coating the rubbing surfaces of the pleura, to a greater or lesser
extent, if newly formed it is soft, gelatinous, and gener-
ally of a yellowish colour; if of older formation it puts on the appearance of an opaque, roug
and ragged mem-
brane, more or less thick,
of greater or less consistence,
and in the texture of these mem-
branes there is sometimes found more or less extensive, calce-
reous deposits.

Adhesions of the Pleura
correlate to the Pleura par-
monalis, are often regard-
ed on opening the chest af-

these adhesions sometimes occur on limited portions of the Pleu-

race alone; but at other times throughout the whole extent of the two Pleuræ, the Pleu-

oral cavity being in these circumstances obliterated.
The toughness of these adhesions varies—generally speaking, recent or adherions which have not existed long, are easily torn through and detached by white. Such adherions as have been of long duration are extremely tough and strong, and are, in fact, often composed of white, fibrous or spongic tissue. These adhesions of the pleurae, one to another, are brought about by the organization of the lymph that coats their contiguous surfaces; the formation in this organized lymph, of new vessels, and finally the transformation into new fibrous tissue, stretching between and adhering to the opposed pleural surfaces. The process is somewhat analogous to that by which healing of wounds or ulcers is accomplished.
Such bright are the inflammatory passions of the Pleurisy preserved after death. But how can we appre-
ciate them during life? What are the symptoms
physical and functional, of Pleurisy?

We derive the physical symptoms or signs of Pleurisy or of its results from—
the form of the chest, from its
movements, from the voice
thrill, from percussion and
cuscultations and from the
changes in the heart's position—
making use of a greater or
lesser number of them.
existence of mere inflammatory
redness and congestion occurring
in the incipient stages of
pneumonia—this condition of the
lung or lungs however abundantly
indicated by the functional symp-
toms hereafter enumerated.

A moderate amount
of purulent or purulent effu-
sion is distinguished by greater
or less dulness on percus-
sion of the side diseased—this
dulness varying with position
of the patient, and always for-
present in the most dependent
part of the side with effusion.
The ear while accentuat-
ing, it finds the minute sounds
of breathing less distinct in
the side where dulness exists
than on the healthy side,
or, it may be found those minute
sounds displaced by phlegm.
voice is also found, in the depressed side, increased in loudness, prolonged, and interrupted, so as to resemble the bleatings of the goat; this, especially at the inferior angle of the scapula in a sitting position of the patient.

A large amount of liquid effusion into the pleural cavity alters the shape of the chest, so that the side with the serous or purulent effusion, becomes larger in circumference than the other side, and bulges out laterally. The natural hollows of the intercostal spaces are, under these circumstances, obliterated, and the lower ribs are tilted up—as happens during a full forced inspiration.
expanded; hands, one on the right, the other on the left; lateral aspect of the thorax, rather low down, with each finger pressing on a corresponding rib; while the patient is taking a full breath, the ribs on the sound side are found or felt to rise, those of the diseased to re-
main nearly stationary. If now the patient breathe the thrill of this force may be felt by the expanded hand on the sound side, and its absence noted by the other hand on the diseased side. Percussion yields the natural sounds on the natural side, but an exceeding, dull, flat sound over the chest distended by the effusion. Auscultation detects loud respiration sounds, such as are heard in children on the healthy
Ride — but complete absence of breathing sounds through the almost whole of the chest, the lung being there collapsed and impermeable to air. The heart, if the effusion be in the left chest, may be observed beating in the hollow of the Epi-sternum — and its sounds are heard most distinctly behind the sternum.

But when the effusion of pericardium does not predominate, but on the contrary, the excitation of elastic tympanum coating the rubbing surfaces of the pleuræ, as a rough and ragged membrane — there is developed an abnormal sound detected by the ear in auscultation, and produced by the friction of the roughened pleuræ on
each other: this sound is sometimes like the soft rustle of silk—and it is difficult, in this case, to distinguish precisely, between it and a concurrent moist rattle; at other times it may be very loud and coarse, so as to resemble the cracking of lea-
-
ther.

The condition of the lungs—thorax is detected by en-
creased, drum-like resonance on percussion of the side of the
thorax. If by the dis-
placement of the respiratory sounds by a peculiar blow-
ing noise—and by increased
raucous resonance of the
chest—voice. If fluid exist along with the air—as in all probability it will, a splashing sound may be heard by shaking
The chest of the patient, while
the ear of the physician is
placed on the affected chest.
The most dependent
part of the thorax, in these
circumstances, will yield
a dulled sound to Percussion—and
the other parts the drum-like
resonance: because the
greater weight of the fluid causes
it to assume a lower position
than the air.

The functional symptoms
of Pleurisy are—Pain—
Dyspnoea—Cough—Inability to lie on the peculiar side—Fever.

The Pain is inexcusable
and is described by
the sufferer as exceedingly
acute, so that it is like the pain
of a stab with some instrument.
The Pain is augmented.
greatly by a full inspiration, or by pressure applied in any way, as by the finger of the physician, and is situated generally below, either mark may. This pain is a very characteristic symptom of pleurisy; nevertheless, it may be small and trifling or altogether absent; it may vary in situation, occupying either the whole of one side of the chest, this shoulder, the joints, or the upper part of the abdomen. It may thus be confounded with the pain of lumbago, Peritonitis, or Pericarditis, or Rheumatism of the intercostal muscles.

The dyspnoea of pleurisy is often considerable. The respirations are short and frequent, but not labored. and this seems to result in short-standing Pleurisy, from...
the dread the patient had
of the increase of pain that
always follows any attempt
either of fuller and more
lengthy respiration; or-
curiously in the later stages
stage of disease, the dys-
ynoea is likely to depend on
the collapsed of one lung and
the impingement that the
other and efficient lung su-
fers from the effusion while
it is expanding, and in fact
performing double duty.

The Dyspnœa, like the
Pain, may be inconsider-
able in the early period-
and when there may exist large
effusions and but one efficient
lung the Dyspnœa may
still be small or only pre-
sent during muscular exer-
cisions.
The Cough in Pneumonia is short and painful; the expectoration, when present, is thick, feathery, and in some cases complicated. Pneumonia generally occurs as a white colour.

The Cough is often troublesome to the patient, because it engulfs him in pain; it may, however, much oftener than the pain in the side, be altogether absent.

The Patient is unable, generally speaking, in the commencement of Pneumonia, to lie on his affected side. This happens, because the pressure thus produced on that inflamed and tender side is exceedingly painful. But when large effusions serous or purulent, have taken place, matter is removed, and the patient can now only lie with comfort, on
the side of effusion or rather on his back inclines more
towards that side, for the following reasons—that he
now has little pain on the
side affected—and the weight
of his body with that of the liquid
effusion, when he lies on his
sound side, interferes with the
expansion of the lung of that
side—the only efficient lung with
the patient progresses.

But the delirium, like the
other symptoms, is subject to
some variations.

The fever of acute
Pneumonia is often great.
This patient, a little before or after the appearance of
the pains in the side, is
followed by violent rigors
which last more or less time
and are succeeded by fleeting
heat of the skin, headache,
intense thirst and loss of appetite. The pulse becomes full and strong, and more rapid than in health, but it seldom beats more than 120 in the minute in pure pulmonary cedema. The alvine diaphragm becomes retracted, and the urine small in quantity and high coloured, and all the other febrile systemic symptoms are well pronounced.

Such, shortly, are the symptoms, physical and functional, of pulmonary.

In recalculation it may be stated, that we have as good proof of the existence of acute pleurisy, if there be present, the sharp pain of the side with dyspnoea and fever, we have almost proof of the presence of fluid in the
Pleurisy if we find dulness in percussion changing with the posture of the patient, particularly always occupying the most dependent part of the thorax. — We find then that there is a great amount of fluid if we find in one side great dullness to percussion and absence of respiratory sounds. — And that there is lymph coating the affected surfaces of the pleurae if we hear the characteristic friction sound, which however is not for mumps. But for accuracy of diagnosis we must rather bear in mind pleuritis attacks liable to be confounded with pleurisy, or often associated with it, together with the means we have of distinguishing those diseases from pleurisy.

Limited adhesions pleurisy accompanies pleuritis in some...
Periods of its progress; and
the adhesions of the Pleurys in
these circumstances are pecui-
lar—i.e., as much as they pre-
vent the bursting of a comi-
ence into the cavity of the Pleurys
wideover they select. But
there is little danger of overlooking
the Pleurys or of confounding
it with Pleurys, if the due at-
tenion be paid to the apices
of the lungs, and to the other
signs of Pleurys.

Pneumonia is often associated
with Pleurys—and its presence
may be detected, for the most
part, by the existence of its pas-
typical post-coloured phena,
by its rapid pulse, and its fever,
which is very apt to shift into
a leathen or adynamic type.

The symptoms of Pleurys
and Pericarditis scarcely return.
The each other, but processes
dial Pain and Palpitation,
and a pound of friction occurring
with this heart's proper sounds
are peculiar to Pericarditis
as it also its connection with
acute articular rheumatism.

In Hepatitis, a disease
dis-facile to be compounded
with acute Fluencing of the
right side, we have vomiting
and hiccup, sometimes
jaundice and sympathetics
pain in the right shoulder
and lastly the absence of the
physical signs of Fluencing.

Lastly we may have

characteristic functional
symptoms of Fluencing, viz. that
Pain in the sides - without
the presence of Fluencing; and
we should suspect that we
had to do with a case of
this feature, if we suppose the other symptoms, which generally accompany Pleurisy, as its fever be absent, and still more, if we observe that this pain was not increased by pressure with the fingers, made when the patients' attention is diverted — or is increased to the same amount by pressure on the ribs as between them.

The progress of an inflammation in the Pleurae, constituting Pleurisy, does not greatly differ from the progress of inflammation in other parts of the body. The inflaming Pleurae become red from increased dilatation of blood to them, fiery and dry from a defect of their water — raw exhalation: — and this state of matters is indicated to the Physician, by the...
early pain, dyspnoea, and fever. The inflammation persisting, leads to the exudation of the liquor lanuginis, in greater or less quantity: and this also is indicated to the observer by the physical signs before mentioned.

But scums of the liquor lanuginis may be comparatively heavy, and quickly reabsorbed, leaving the humour coated with plastic fibrine, the other constituent of the exuded liquor lanuginis: and this is also perceived by the ear of the physician, by a characteristic, though generally short lived, sound, before described.

This fibrine coating the humour may become more or less quickly organized and vascular, and may unite the two humour, obliterating more or less of their cavity, the
Patient nevertheless recovering well.

At the termination of the excited liquor tachyminis, may preponderate over the ligbino, filling the cavity of the pleuric and, in this case, instead of adhesions of the pleuric, we have their wide separation. Such a state of matter often comes on without any warning by functional symptoms, and is only discovered by the physical symptoms before innumerable.

-- or the excited liquor tachyminis may be converted into pus generally indicated to the physician by the accension of hectic fever.

The prognosis in uncomplicated Pneumonia is generally favourable, the Patient in most cases making a complete recovery, or recovering with such additions of the Pleuric as do
not seem materially to interfere with the long duration of life, or with its enjoyment. When the pleurisy is however, complicated with blood effusion, purulent or serous, the prognosis is not so certain. But still the patient may make a slow recovery—the effusion being gradually removed by unchanged nature, the chest thereafter remaining for some time contracted, and flattened and smaller than the other—but eventually resuming its natural dimensions.

Of before this can happen, a deep, connected with the cavity of the pleuræ, may form and open on any part of the chest, or even in the joint giving gradual ascent to the fluid contained in this pleuræ; the patient either dying exhausted or making a recovery similar
to think, when the fluid is merely absorbed, or the fluid may remove its way by altercation through the lungs into a larger bronchus, and may be then be expectorated with the same result as in the two former cases.

Or, before absorption or evaporation by an external or internal drainage takes place, the patient may sink in direstion.

Or, sudden death by signs may sometimes happen on any sudden exertion.

Or, the patient may die by aspiration if the effusion is poured out at all rapidly.

Or death may take place from other circumstances of the diseas.

The duration of pleurisy is influenced by the constitution of the patient, and by the treatment to which he may have
been subjected. Generally, pleurisy, when attended by a cavity effusion lasts but a short time — attended with large effusions, it is apt to become chronic, lasting for months, or even years.

The most probable exciting cause of pleurisy, seems to be exposure to cold and damp combined. — The other exciting causes are more or less mechanical, as blows on the chest — irritation produced by broken ends of ribs, — by bones, tearing wounds with or without lodgement of foreign bodies, — irritation from the presence of tubercles in the lungs, etc.

The treatment of pleurisy varies according to the degree as acute or chronic; and as it is attended by coughs,
effusion or not, for the relief of the acute stage of Pneumonia, we have the antiphlogistic remedies and purges. For the cure of the chronic form of Pneumonia we have local counterirritants, and pelvicants and sometimes the home regimen. Against the effusion we avail ourselves of local purgants, diuretics, and a dry diet, and paracentesis.

In the acute stage of Pneumonia, rest, quiet, both diet and attention to the alvine and other excretions are applicable. At the commencement of Pneumonia when the pain, dyspnea, and fever are great and the Pulse strong, bleeding from the anodyne may be practiced both with benefit as also preventively, often to stop the further progress of the disease.
the amount of blood lost being regulated by the good effect on the pain and well-being. In second general bleeding in the more plethoric and a local one in the feeble may, after the lapse of some hours, be made if the symptoms have not yielded to the first bleeding. The antimonial regimen being still enforced and mercury in any consequent forms being, at the same time, exhibited as freely as to produce its mild constitutional effect.

or if mercurial is contraindicated, antimony may be given so as to bring on acutely its slight purging effect. If moderate effusion is diagnosed, and the symptoms the those of a rubbante
plate of the Pleurisy, resuming on the Chest combined with ulcer, either saline or vegetable, will sometimes be highly beneficial. Stimulating expectorants ought to be given, if the Cough prove troublesome. And attention at the very outset of the disease should be paid to the condition of the bowels. Under such treatment most patients labouring under acute Pleurisy recover from their urgent symptoms in from 6 to 16 Days. The enrobing of the vesicles, with attention of the chest by effusion of repeated blisters on the Chest and Ulcers together partly a dry chest should be tried with a view to diminish the amount of the effusion. But when these means
fail, and they often will fail—after having been persevered in for a sufficient length of time, when the fluid rests lying in the chest is subjected to basilar purulent—then death by asphyxia or syncope threatens—then the patient lapses, grows daily and death by asthma ensues. In all these cases we have no better remedy than an artificial evacuation of the fluid. But before proceeding to this evacuation, we must be sure of the accuracy of our diagnoses: and if the signs of great effusion, formerly enumerated, are present, we may be pretty confident that there is either effusion of a large malignant growth in the cavity of the pleura. But the latter of the two cases is extremely rare, therefore the
probability is in favour of the existence of effusion. To make this probability certain, we may put a perfectly safe to the patient, the small exploring needle, thrusting it through the chest, at any convenient spot, and exploring if there be fluid that it shall trickle from the needle.

The operation itself is performed by puncturing the wall of the chest by a very fine and camilla. The tip of the camilla should be of small size. The puncture is often made, beginning between the 5th and 6th ribs, equidistant from the spine and sternum on the lateral aspect of the chest. If no puncture between some of the lower ribs, we run a risk of
In surgery, it may be, the abdomen and peritoneum pushed up by an enlarged liver on the right side of an enlarged spleen on the left. Other parts of the chest are often chosen for the puncture.

And Nature, as we have seen, at times points out to us the most convenient spot.

The puncture may be conveniently made by thrusting the trocar and cannula directly the thoracic wall at the chosen spot - or the trocar consists to be directly drawn upon, and alone perforated by the trocar. After having perforated the pleura, it seemed safest to stop the flow of the fluid when in dream gradually depends and to close the opening made by the trocar: because there is otherwise a chance
that air will pain admittance into the sinuses, and there probably it will excite an exagerated effort of inflammation. But some authorities deny this, allowing all the fluid to escape through the canals, and thus whether that fluid be venal of the veins, or again only of the fluid she is prudent. Most authorities advise immediate closure of the minute puncture after the evacuation is completed; some advise the puncture to be left open, if the fluid proves to be green. After the operation, the patient should be kept quiet and heeded; the fluid should be applied to the chest whenever the first signs of inflammation appear. Concerning the operation it may be stated:—first— that it is not in itself dangerous—secondly,
that it affords the patient a chance of recovery - or prolongs his life.

Pneumothorax, as it requires the practice of the Physician and when fully developed, seems beyond the reach of cure: but it is astounding how little inconvenience it generally occasions. Pneumothorax in the practice of the Surgeon, may be completely relieved, oftentimes by a clyster.

We have thus enumerated the most common symptoms of Phthisis - and the most usual modes of treating it. A knowledge and recollection of which will, in many cases, enable the Physician to recognize and relieve the Disease. But other other, and unusual symptoms present themselves, along with these more direct symptoms indicative of Phthisis, leading to difficulties of diagnosis and only to be managed by careful observations. In treatment too, many symptoms will occur, for which no general rule can at all
answer—and which requires the
formed good senses of the Physi
=Clare.