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INAUGURAL ESSAY  
ON  
**PULMONARY INFLAMMATION,**

SUBMITTED BY AUTHORITY

TO THE

PRESIDENT AND COUNCIL

OF THE

FACULTY OF PHYSICIANS AND SURGEONS

OF THE

**UNIVERSITY OF GLASGOW,**

AUGUST 1, 1826;

WHEN

**CANDIDATE FOR A DIPLOMA,**

AND FOR

ADMISSION TO THEIR

**DEGREE OF MASTER OF SURGERY.**

---

**BY WILLIAM LEMON DUNLAP,**

LATE PUPIL OF GUY'S HOSPITAL, LONDON.

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ON

PULMONARY INFLAMMATION

FORWARDED BY AUTHORITY

TO THE

PRESIDENT AND COUNCIL

OF THE

FACULTY OF PHYSICIANS AND SURGEONS

OF THE

UNIVERSITY OF CAMBRIDGE

IN CANDIDACY

FOR

A DEGREE

OF

ADMISSION TO THE

DEGREE OF MASTER OF SURGERY

BY WILLIAM LEWIS D.D.

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1892



TO

**JAMES DUNLAP, Esq.**

**SURGEON, LONDON,**

**HIS FATHER AND BEST FRIEND ;**

**WITH THE TENDERNESS OF FILIAL AFFECTION,**

**AND THE**

**GRATITUDE DUE TO HIM,**

**TO WHOSE GENEROUS KINDNESS**

**HE OWES EVERY THING FOR WHICH LIFE IS VALUABLE,**

**THE FOLLOWING PAGES ARE**

**DUTIFULLY INSCRIBED**

**BY**

**HIS SON.**

TO

JAMES DUNLAP, Esq.

SURGEON, LONDON.

HIS FATHER AND BEST FRIEND

WITH THE FRIENDSHIP OF LINDAL AUSTIN

AND THE

KNOWLEDGE OF HIS OWN KINDNESS

TO WHOM HIS KINDNESS

KNOWS EVERY THING FOR WHICH LIFE IS WORTH

THE FOLLOWING EARNS ARE

OF THEIR KINDNESS

HIS FATHER



AN ESSAY  
ON  
PULMONARY INFLAMMATION.

By W. L. DUNLAP.

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PNEUMONIA, or PNEUMONITIS, is the term commonly employed to denote inflammation of the pectoral cavity, or its organs, except the heart. It is a term derived from the Greek word *Pneumon*, a *lung*, which again originates from *Pneo*, to *breathe* or *blow*. Hence "*Pneumonia*" may either refer to the lung, or to the function of the lung, Respiration; but as *Peri-pneumonia* is the term used for this disease, in preference, by GALEN, HIPPOCRATES, and ARETAEUS, it is more probable, that it merely relates to the former. It is sometimes named Pectoral Inflammation by practical writers; and is defined by Dr. CULLEN, the best of these, as follows:—

## " PNEUMONIA.

" Fever, difficult breathing, pain in any part of the chest, cough."

From the earliest ages, authors have distinguished *Pleuritis*, or inflammation of the costal pleura, from *Peri-pneumonia*, or inflammation of the investing membrane of the lung itself. It appears, from the account given of this disease by ARETAEUS, that the ancients considered the parenchyma of the lung as too soft and "woolly," to be easily capable of undergoing inflammatory action. Hence Dr. CULLEN has made two species of Pneumonia, and added their distinctive characters, according to the notions of Physicians; professing, however, his entire disbelief in their constancy.

"1. *Pneumonia Peri-pneumonia*.—Pulse sometimes soft; obtuse pain of chest; respiration constantly difficult;



often only practicable in the erect posture; a purple colour and tumidity of the face; cough generally humid; the expectorated matter often mixed with blood."

2. *Pneumonia Pleuritis*.—Pulse hard; pungent pain, generally of the side; especially increased during inspiration; rest on the pained side uneasy; cough very painful; expectoration first dry—then moist—"often bloody."

It is evident that the inflammation of the mediastinum, of the heart itself, of the pericardium, of the pleura of the diaphragm, &c. may all produce the characteristic symptoms of *Pneumonia*—and so much do the signs of *Bronchitis* and *Pleurodynia* approach to the same notion, that it is only a few years since they have been ranked as distinct diseases. Perhaps the whole of these forms of inflammation of the pectoral organs might be arranged, in Nosology, as *species* of *Pneumonia*.



## CAUSES.

The only well established exciting cause of Pneumonia is cold. Wounds, indeed, fractured ribs, acrid matters any how admitted into the cavity of the chest, translated inflammations, and the action of certain morbid poisons, as the *exanthemata*, for instance, may also produce Pneumonia, but in such cases, the cause is so well known, and so violent, that we transfer both our attention, and the name of the effect, to the agent itself; denominating the case, *wound of the chest, fractured rib, translated gout, or pulmonic fever*, according to the nature of the latter.

It follows that Pneumonia ought to be more frequent in cold countries and seasons; and this is confirmed by experience. Canada, Nova Scotia, and the United States of America, are perhaps the countries, of all others, in which the vicissitudes of atmospheric heat and cold are greatest, and it is precisely in these



that Pneumonia is remarkable for its frequency and fatality. A middle age, sanguine temperament, and a plethoric state of the system, are believed to dispose the possessor strongly to inflammation of the lungs; and this susceptibility is said to be still further favoured if the sex of the individual, exposed to the exciting cause, be masculine.

### SYMPTOMS.

I have just said, in the definition, that fever, pain of breast, difficult respiration, and cough, are the essential symptoms of Pneumonia. These signs indeed comprehend not only all the characteristic indications, but nearly all the phenomena of the disease. The flushed face, sonorous breathing, the pain increased by inspiration, the difficulty of lying on the affected side, the mucous, bloody, or purulent expectoration, the shudderings at the commencement of the disease, are all the



consequences of one or other of the primary symptoms laid down in the definition.

The disease may go on for several weeks, and yet recover without the intervention of medicine: but this is an extremely rare case, and merely to be considered as a fortunate accident. In all ordinary instances it proceeds to effusion, or to suppuration; and in a few, it is said to gangrene. Adhesion of the pulmonary pleura to that which lines the internal concave aspect of the ribs, is the result of effusion, coagulable lymph being the fluid *first* thrown out, although it may afterwards be succeeded by serum, or by pus.

Of each and all of these terminations death is the consequence. Effusion suffocates, sooner or later: suppuration induces hectic, which gradually consumes the flame of life, under the form of *vomica* or of *empyema*.

In a few fortunate examples, the *vomica* or *empyema* have made a way for themselves to the surface; the discharge of pus from them has gradually lessened, and with it, the hectic: the pulmonary sore, in short, has



degenerated into a common ulcer, which has gradually filled itself up by granulation, and the man has recovered: and this whether the external opening was natural or artificial.

Such is the mere outline of the history of Pneumonia. I proceed to trace the mode in which it may be distinguished from other diseases,—its prognosis,—and the mode of treatment approved of by the most skilful physicians.

In the broad sense which I have given to the generic term, many subordinate species are comprehended, which it may be of use occasionally to distinguish; but none of them so much so as rheumatism of the chest, and catarrh, diseases which seldom call for the active treatment that is imperatively necessary in Pneumonia.

*Pleurodynia* seldom has much fever: it scarcely ever has cough, or difficulty of *natural* respiration: if this indeed be rendered *vehement*, by a voluntary *effort* of the individual, very acute pain is perceived in the seat of the affection, which, however, goes off, or decreases, after a



few inspirations, though it would infallibly have been exasperated in any pneumonic inflammation. Lastly, external pressure very much aggravates the rheumatic pain of pleurodynia; it scarcely is perceived in pneumonia; and the latter is rendered greatly more painful, while the pleurodynia is relieved, by horizontal posture, among the warm bedclothes.

Between Catarrh and Pneumonia the distinction is not very difficult; for though catarrh may have *all* the symptoms assigned in the definition to Pneumonia, yet it has also *symptoms peculiar to itself*, which, being more severe, the more the catarh resembles Pneumonia, augment the facility of Diagnosis. These are—*hoarseness, abundant mucous expectoration, discharge of thin mucus from the nose, stuffed, wheezing respiration, sneezing, pain of forehead*, often soreness of the bones of the face upon pressure. If these peculiar symptoms are absent, the disease is Pneumonia, or at least *Bronchitis*, which requires to be treated nearly in the same manner.



*Bronchitis*, however, is distinguished by the absence or slightness of pain, the sense of fulness, the peculiar noise made by the breathing, the extent of the full respiration that can be made, almost without pain, by an effort, and the copious expectoration.

*Carditis* is recognised by the irregular pulse, the tendency to syncope, and the peculiar seat of the pain. It is often mistaken however, and the error is of little consequence, as the only cure for either is depletion.

*Prognosis.* The event of Pneumonia is very much influenced by the violence of the exciting cause, the constitution of the patient, and the length to which the disease has proceeded before medical interference has taken place. Thus, if the patient is very robust, of a sanguine temperament, has been exposed to a high degree of cold when the body was much heated, and has lain several days before he is seen by a medical man, the chances are much less favourable, than they would have been, in contrary circumstances. But the worst prognosis is afforded of the event, when effusion or sup-



puration has taken place; from either of which cases, the chances of recovery are very small; though rather greater than from suppuration or effusion taking place into any other cavity.

### TREATMENT.

The prime indication in *Pneumonia* is to subdue inflammation; for in this the disease essentially consists.

Should it, however, unfortunately happen that suppuration or effusion has ensued before the medical man has been called in, the line of treatment to be pursued must be totally different; and, in a great measure, regulated by the present state of the symptoms.

To fulfil the first indication, which is also the most ordinary one, blood must be taken largely from the cubital or jugular veins. The quantity taken is mainly to be regulated by the effect produced. Perhaps, in every case, the blood should be allowed to flow till the



patient feels himself relieved, or till some marked effect upon the system warn us to desist.

The auxiliary means may then be applied, and if the patient continue free from pain and difficulty of breathing, it may be unnecessary to repeat the bleeding; but in every other case it must be repeated again and again, until the symptoms are removed. To render repetition less necessary, the first bleeding should be large.

The bowels are to be freely opened by a brisk purgative, say of (gr. xxiv.) jalap, and (gr. viij.) calomel. The tartrate of antimony, given in doses of half of a grain every second hour promotes expectoration and diaphoresis, diminishes the action of the heart and arteries, and gently aids the other agents employed in opening the bowels. Of late it has become fashionable to exhibit this remedy in immensely large doses, three grains being given for a portion, five or six times in the day, by RASORRI, TOMMASINI, and some Italian authors, as a *contra-stimulant*; but this method has not been found very successful in Britain.



A blister is a much more efficacious auxiliary to the lancet, than this practice. That made from the Emplastrum Cantharidis is reckoned the best; but, though other Epispastics may answer very well as substitutes, when this is wanting, none of them should be applied before an impression has been made upon the system by bleeding. An ample blister is then so to be laid over the pained part, as to extend considerably beyond the seat of uneasiness on either side. It will act as a counter-irritant, and, indeed, will frequently remove the whole complaint, like a charm; and, in almost every instance, induces considerable mitigation of the symptoms.

The above plan of treatment will be most successful when applied near the commencement of the disease: but it is the sole method to be pursued, unless symptoms of actual suppuration have taken place; nor is there any fixed number of days from the commencement (as was formerly believed in regard to the seventh,) beyond which its exhibition would be useless.



Suppuration is always indicated by hectic ; and, in this case, the fever is to be repressed, the strength supported ; all augmented discharges to be restored to the natural standard, and every means should be taken to facilitate respiration, which in this case is apt to suffer extremely by expectorants, diaphoretics, opiates, and due attention to regimen. Should at length Empyema distinctly manifest itself by a tumour of the side affected, by orthopnea, fluctuation, and the proper symptoms of hectic, we may then safely proceed to the perforation of the chest by the operation of Paracentesis, which often cures the disease.

The diet should be light but nutrient, in the chronic stage of the affection ; and exposure to cold, vehement exercise, and long or loud speaking, are for some time to be carefully avoided.



Support is always indicated by heat; and in this case the fever is to be treated, the strength supported; all augmented discharges to be restored to the natural standard, and every means should be taken to facilitate respiration, which in this case is apt to suffer extremely by expectorants, diaphoretics, opiates, and due attention to regimen. Should at length Empyema distinctly manifest itself by a tumour of the side affected, by oropharyngeal fluctuation, and the proper symptoms of hectic fever, we may then safely proceed to the perforation of the chest by the operation of Paracentesis, which often cures the disease.

The diet should be light but nutrient in the chronic stage of the affection; and exposure to cold, vehement exercise, and long or loud speaking, are for some time to be carefully avoided.

For the Medical Society



from the Author

J. J. K.

~~iv: 6: 37~~





*The dark Circle is part of the Choroides.— The Iris and  
Pupil, are seen through the transparent Membrane describ'd.*