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AN

INAUGURAL DISSERTATION,

ON

Pleuritis

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Pleurisy

Is a disease of the inflammatory type, located in the serous membrane lining the thoracic cavity. It is of more frequent occurrence than we might suppose, were it not from the revelations of post mortem examinations which constantly admonish us of the fact of its having existed at some period of the individuals life,— though when present it may have given us no indications by which it could be recognized.

The disease may attack both pleurae simultaneously, though is usually confined to one, in which case a preference is most generally manifested for that on the right.

In the investigation of pleurisy we

shall first in as concise and cursory a manner as is consistent with the object of this thesis, take into consideration its anatomical characters;- not wishing to encumber our pages with futile and unnecessary minutiae.-

Redness of the membrane, or rather of the subserous, cellular structure, comprises the first departure from healthy to deranged function.

Upon its accession;- the capillaries ramifying beneath the membrane being in a relaxed and distended condition;- speedy secretion and exudation of matter ensue. The effusion may be either concrete or liquid, generally both; the one or the other predominating. The concretion is thick, viscid, or

paste like. The first stratum exuded is thin and scarcely visible, afterwards it becomes thicker, from the elimination of additional layers. Its extent is limited by that of the inflammation;- generally circumscribed, though at times diffusing itself over the entire superficies of the membrane. It is recognized by its color, which is grayish, grayish white, and sometimes tinged with red. It is plastic in its nature, and though when first thrown out is devoid of vitality, it is soon imbued, under advantageous circumstances, with that principle;- Small specks of blood are deposited, which extending themselves are soon found, ramifying, and inosculating throughout its entire extent.

The liquid secretion is at first slight, but is apt to increase in quantity as the disease advances. Pleurisy may run its entire course with scarcely any perceptible effusion, or conversely in a very few hours, the accumulation may be so great, as to have entirely filled the Thoracic cavity,— distending the chest, impeding respiration, and sometimes displacing the circumjacent viscera— whether of the thorax or abdomen. The serous fluid may present a diversity of color, such as yellowish, limpid, clouded, turbid, &c. It is usually found floating free in the cavity, determined in its position by that of the body,— save when confined by pleural adhesions.

Upon its absorption the patient may return to health, without any derangement of original structure, yet so favorable a termination rarely obtains. The most common and natural termination, is in the adhesion of the opposing pleurae. - Occurring early when the effusion is slight, and later when of larger quantity; - preventing by its interposition, the contact or approximation of the two surfaces.

The disease is ushered in by chill, and pain in the side. The symptoms which are afterwards developed, and go to characterize it, are pain, dyspnœa, dry hacking cough, quick and suppressed respiration, with fever.

The pain may either precede the

chill, appear simultaneously or subsequently to it. This is one of the most characteristic signs of the disease. It is usually circumscribed. The patient complains as if some sharp, penetrating instrument were being thrust into his side; which at each inspiration is increased, and aggravated. The seat of the pain, is most ordinarily found in one or the other mamma. Why it should display a predilection for this particular region we can perhaps assign no definite or plausible reason, though various speculations, and hypotheses have been excogitated in behalf of its elucidation. The pain is increased at each inspiration, and if the patient

for a moment suspend respiration, he will find for the time a remission or subsidence of the pain. It is increased in severity by cough, sneezing, intercostal pressure or the different movements of the body. Upon effusion the severity of this symptom is much ameliorated. In some cases no pain is evidenced during the entire run of the disease, while in others it may be barely perceptible, or again appear in severe exacerbations from the first.

Cough is usually present, though in some cases where the inflammation is intense, and effusion considerable, this symptom is entirely absent. It is small half suppressed, and ineffectual. There is commonly but little

expectoration. When expectoration is much frothy, the inference to be adduced is implication of the bronchii; Or if the matter ejected, be incorporated with rust colored Sputa, we are justifiable in predicating upon this fact the complication of the disease with Pneumonia.

Dyspnoea is another of the ordinary signs of this disease. Breathing is from the first unnatural and embarrassed. Upon each inspiration the pain is enhanced; its severity depending upon the greater or less expansion of the chest.

In the first stage of the disease, the patient generally confines himself to the sound side, yet even here

a great diversity of opinion prevails amongst authors. In the second stage or when effusion has taken place the patient confines himself to his back, or to a position intermediate between that and the side. This position appears to be the one most naturally indicated. The sound lung having to perform the office of its fellow is already encumbered with greater duties than it can with facility perform; whereas if the patient were to confine himself to the sound side, free expansion would not be admitted, while at the same time the effused serum compressing it from above, would so far impede its function as to

render it inadequate to the duties imposed.

The fever generally runs high and is attended with the ordinary phenomena of chill, hot skin, rapid pulse, furred tongue, red and scanty urine &c. In the greater number of cases, the pulse is frequent, hard, and full, though when the patient is tortured with great anguish, the pulse is hard and contracted. Delirium may supervene though is of unfrequent occurrence. The fever when properly treated most usually subsides by the fourth or fifth day. Having alluded to and discussed seriatim the rational signs, we shall now bring under consideration the physical, which are

of the highest importance in assisting us, to form a correct and accurate diagnosis of the disease;- for by a proper knowledge, and just conception of these signs, we are often enabled to penetrate the mysteries, which would otherwise enveloe the disease, and and to seize upon phenomena, by which we sometimes are alone enabled, to differentiate it from other affections which approximate its symptoms. In the commencement of the attack, it is scarcely ever in our power, to bring these signs into requisition; no perceptible change having occurred, save that of diminished respiration, which is attributable to the suppressed breathing to

which we have before alluded. It is only after the exudation, of the tenacious lymphy matter, that we have any reliable, or creditable evidence of the existence of the disease, and this sign is so evanescent in its character, that without we avail ourselves, of its assistance at an early period, we are apt to loose it, as it soon disappears by adhesion of the antagonistic pleurae, or the transudation of serum. It is described by all authors, as a soft grazing friction sound, caused by the rubbing of the two pleural surfaces upon each other. In this condition if the hand be applied to the chest a peculiar grating sound is imparted

to it. It is a valuable sign when met with, but as remarked before its nature is so transitory, that it is usually superceded by other Symptoms before an examination is made. After effusion has taken place, we can hardly then be mistaken as to the true nature of the disease. Upon the accession of this Stage, the natural resonance of the chest has disappeared, and when contrasted with the sound lung, will be found to be much the most flat and dull. The dulness is first found in those parts most dependent, but as the disease advances, the serum continues to accumulate until the greater portion or even the

entire cavity may be inundated. the respiratory murmur already lessened by the effect of pain, is diminished to a much greater extent, where effusion has taken place, and when as extensive as above alluded to has entirely disappeared. If the sound lung be now examined, it will be found that the respiratory murmur is much louder than in health. to this authors have affixed the name of puerperile respiration. It is during the stage of effusion, that we recognize the trembling, vibratory, quivering or bleating sound denominated egophony. When the stratum of liquid is thin, this sound is distinctly audible, but is diminished in a direct

ratio to the increased accumulation of fluid. The course or length of the disease has no definite termination, depending entirely upon the phenomena presented in each individual case, as well as the means employed to combat it. It may often be subdued at the onset if active and vigorous treatment be adopted. After the deposition of coagulable lymph, the pleurae may be agglutinated, and the patient return to health within from three to five days. Effusion may deviate in time of occurrence from one to four days. After this period absorption may occur, the morbid sounds be removed, pain abate, and the parts

resume their natural healthy function. The average termination of the disease, *cæteris paribus* is from five to seven days. However instead of so favorable a termination, it may continue for weeks or months. The pain and fever may have almost entirely subsided, while effusion remaining unchecked, accumulates to an enormous quantity. Egophony disappears, bronchial respiration recedes, and general dulness upon percussion obtains. The disease even under these complications may at last terminate favorably.

The causes leading to the production of this disease are various. Amongst the most common of these

causes, is sudden exposure to cold, especially when the body is quite warm or perspiring. We might enumerate many other causes which acting directly or indirectly, serve to establish the disease, Yet as the great majority of cases are predicated upon the etiology to which we have already referred, and as I have treated more elaborately of the disease than I had originally intended, or anticipated, I will desist from further comment upon this head.

The diagnosis next demands our consideration. It is frequently difficult especially in the commencement of the attack, to give a correct and proper diagnosis, so prone are

we under certain circumstances to confound it with other diseases that resemble it in its characters. Those diseases from which it is most difficult to distinguish it, are pleurodynia, pericarditis and pneumonia. In pleurodynia we have neither fever or cough, nor in fact any of the symptoms by which we recognize pleurisy, save pain and diminished respiratory murmur. The difficulty of diagnosis would not therefore be great to the well informed and intelligent physician. In pericarditis the symptoms are more nearly allied. Pain friction sound and dulness of percussion are all present. In diagnos-

tication we would first reflect upon the position of the pain, which in pericarditis will invariably be found in the praecordial region. Again the dulness may not be so extensive, nor so variable as in pleurisy, where when left free and unobstructed the fluid by force of gravity will seek that part most dependent. The friction sound will also contribute something towards the diagnosis. In pleurisy it is not so frequent, occurring at each inspiration, while in pericarditis it will be found synchronous with each beat of the heart.

The distinction between pleurisy and pneumonia is usually most easily discerned. In the former the pain

is concentrated, sharp and penetrating, while in the latter it is dull and heavy, or may be entirely absent. In pneumonia the expectoration is thick, tenacious, and rusty; in pleurisy it is mucous, transparent whitish, and sometimes streaked with blood. In pneumonia egophony and friction are wanting, while in pleurisy, crepitant rhonchus is likewise absent. In the latter the dulness of percussion is also much earlier met with, nor is it so fixed and circumscribed in its position as that of the former.

If we are called to a patient especially of plethoric habit, labor-

ing under the acute form of this disease, with severe pain and stitch in the side, difficulty with pain increased upon respiration, and also with tense, hard, and full pulse, we would not hesitate to treat him upon the most active and vigorous principles. We would commence by placing the patient in an upright position, and, bleeding him from a large orifice until "something happens", or in other words until either the pain is relieved, the difficulty of respiration is mitigated, or faintness superinduced. If we bleed copiously in the beginning, there is generally no necessity of recurrence to the lancet. Yet if there be only a tem-

porary relief, or amelioration of Symptoms, the lancet should be again employed. Having adopted this treatment, should the pain and fever have not entirely subsided, it would be advisable to cover the part with leeches, or resort to other topical and local treatment such as cupsdc.

Nothing would be found more grateful and soothing to the patient than to follow this treatment by the application of an emollient poultice. In every stage of the disease our attention should be directed particularly to the bowels; seeing that the patient has one or more operations daily. Almost any of the purgatives such as salts sen-

na &c, may be employed for this purpose. It is of much importance that calomel be exhibited, which when given in small doses, and at regular intervals in combination with opium, is only secondary to bleeding in the treatment of this affection. After fever, pain, and every other symptom of the disease has been removed, the effused fluid will sometimes remain. Under such circumstances the antiphlogistic treatment should be enjoined. Low diet, calomel to the extent of slight ptyalism, diuretics, purgatives, and blisters to the affected side, are in such cases plainly demanded. As a diuretic none has been found, more efficient than

that of a combination of squills, calomel, and digitalis. The effusion will often speedily disappear under this treatment, and the compressed lung be restored to its normal and healthy condition. —