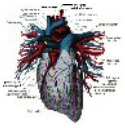

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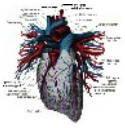


PART II.

E.M. HALE, M.D.

INFLAMMATORY AFFECTIONS OF THE HEART.

LECTURE V.

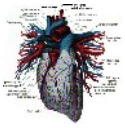
GENTLEMEN: I shall call your attention in this and following lectures to the

INFLAMMATORY AFFECTIONS OF THE HEART.

Inflammation of the heart may affect one or more of the structures which compose that organ. The investing serous membrane may be alone inflamed, constituting the disease known as *pericarditis.* When the membrane lining the cavities, or the endocardium, is the seat of inflammation, the affection is called *endocarditis.* Inflammation of the muscular tissue, or substance of the heart, is designated *myocarditis* or *carditis.*

Although these different inflammatory affections may exist each independent of the others, they are often associated. In many cases of pericarditis, carditis co-exists. Myocarditis very rarely occurs except in connection with inflammation of either the investing or lining membrane of the heart.

The importance of these diseases cannot be overrated, and their study is of the highest importance. They are seated in *the* great *vital* organ of the body. They involve great suffering and danger to life. Their remote consequences are very grave. All organic affections of the heart have their origin in the inflammatory. Too many physicians neglect to study this class of affections, greatly to their own detriment and that of their patients. The homoeopathic treatment of inflammatory cardiac affections, if skillfully applied, is vastly superior to the ordinary methods. The late improvements in-physical examination greatly facilitate correct diagnosis, and enable us to combat these diseases with the happiest results.



PERICARDITIS.

Acute pericarditis — Anatomical characters — Morbid changes — Causes and pathology — Connection with rheumatism—With albuminuria — With Bright's Disease, pyaemia, etc. —Symptoms — Of the heart — Of the circulation — Of the respiratory symptoms — Digestive organs — Brain and spinal cord — Physical signs of pericarditis — Signs furnished by auscultation, percussion, palpation, inspection, and menstruation — Summary — Diagnosis — Prognosis — Treatment.

Inflammation of the investing membrane of the heart is less common than endocarditis, but it is a more serious affection as regards immediate danger.

This membrane is like the serous tissues in other portions of the body, and inflammation results in the same changes in this, as in the pleural and peritoneal membranes. It is more dangerous than the other serous inflammations, because of the small size of the pericardial sac; and the fact that the heart-substance consists of muscular tissue, also because of the important function of the organ and its physiological relations.

In treating of *pericarditis* the following points will be considered:

1. The morbid changes incident to the disease.

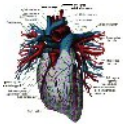
2. Its causes and pathological relations.

3. The symptoms, signs, diagnosis, prognosis, and treatment.

Like other inflammatory affections, this has an acute, subacute, and chronic form.

THE MORBID CHANGES.

The inflammation is seldom diffuse, and is generally limited to single spots. The membrane at first looks injected, opaque, sometimes spotted, in consequence of slight extravasations. Acute inflammation speedily leads to exudation of lymph. This exudation takes place, in most cases, probably within a few hours from the commencement of the inflammation. It is at first of a jelly-like consistence, and adheres slightly to the membrane, forming a thin layer, either limited to the base of the organ and about the roots of the large vessels, or extending more or less over the pericardial surface. The heart, at this stage, is said to present an appearance like that of hoar frost, or to a "layer of liquid gelatine spread upon the parts with a camel's hair pencil." The exudation goes on, and generally, but not invariably, more or less liquid effusion accumulates



within the pericardial sac. This effusion varies in quality and quantity. It may amount to a few ounces or to several pints. The exudation either consists of plastic lymph, mixed or not with serum, or blood, very seldom of serum alone.

The *first* stage extends to the time when the accumulation of lymph is sufficient to be determined during life by symptoms and physical signs.

The *second* stage embraces the period during which an appreciable amount of liquid continues.

The *third* stage comprises the duration of the disease after the resorption of the liquid.

These stages have been called stages of exudation, of liquid effusion, and of adhesion.

If the disease do not prove fatal, the liquid is gradually absorbed, and adhesion follows; or absorption occurs without adhesions; or a membrane may be formed from the plastic exudation; or the effused fluid may be changed to pus. The adhesions may be firm and extensive, or delicate and thread-like.

A liquid effusion sufficient to be manifested by physical signs may take place at a period of the disease, varying from one to four days from the date of the attack.

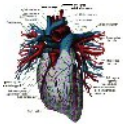
Death usually occurs during the period of liquid effusion.

The effusion is sometimes absorbed quite rapidly, in other cases slowly. In the latter instance, a condition obtains which has been called *dropsy of the heart.*

CAUSES, AND PATHOLOGICAL RELATIONS.

Acute pericarditis is rarely an idiopathic or primary disease. In the great. majority of cases it is a secondary affection. There are many cases of which it is an occasional concomitant, but in the larger proportion of instances it occurs either in the course of *acute articular rheumatism,* or the renal affection known as *Bright's disease.*

Of 847 cases of rheumatism, collected from various sources, and analyzed by Dr. Fuller, it existed in 142, or about one to every six cases.



Of 50 cases collected by Dr. Flint, it existed in 19, or more than one-third.

Rheumatism is more likely to become complicated with pericarditis in the young than in the aged, and occurs oftener in females than in males.

The more acute the rheumatic affection, the greater the liability to pericarditis; and it occurs oftener during first attacks than in subsequent.

That there is an intimate relation between acute rheumatism and pericarditis admits of no doubt, but the common notion that there is a metastasis from the joints to the heart is erroneous, although some cases appear to support the supposition. The facts are that pericarditis often precedes the affection of the joints, and the inflammation of the joints does not usually subside when the heart is affected.

The true explanation of the apparent transfer of the disease, and of the relation existing, is, that the pericarditis and affection of the joints depend upon the same condition of the blood. The analogy of structure between the pericardium and the synovial membranes will account for the liability of the former to become inflamed when the latter are affected.

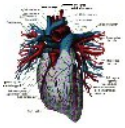
The connection between pericarditis and albuminuria and uraemic phenomena is now quite definitely ascertained.

Of 35 cases of pericarditis analyzed, with respect to causation, by Dr. Taylor, renal disease existed in 13.

Of 50 cases collected by Dr. Flint, renal disease was present in 7. Of 292 cases of renal disease analyzed by Frerichs, pericarditis occurred in 13. Of 135 fatal cases of pericarditis analyzed by Dr. Chambers, the kidneys were diseased in 36.

Renal disease exists in a larger proportion of the cases of pericarditis which end fatally than of those ending in recovery. The explanation of this is, pericarditis developed in connection with Bright's disease usually ends fatally; whilst in connection with acute rheumatism recovery takes place in a large proportion of instances.

What is the relation between pericarditis and certain renal affections ? It is well known that serous inflammations are apt to become developed in connection with Bright's disease. These inflammations are attributed to the accumulation of urinary principles in the blood, from faulty excretory function in the kidneys. The excess of urea, or the decomposition of its



products in the blood, act as poisonous agents, giving rise to inflammation of the pericardial and other serous membranes.

Pericarditis may be associated with pleurisy or pneumonia. It must not be supposed, however, that it obtains by means of extension, but results from the same pathological cause.

Pyaemia frequently co-exists with pericarditis. Wounds, and surgical operations, in tissues remote from the heart, sometimes give rise to pericarditis. The explanation is, the blood becomes poisoned so as to cause serous inflammations.

SYMPTOMS OF ACUTE PERICARDITIS.

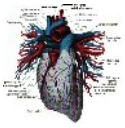
The symptoms of pericarditis vary with the three periods of the disease. They are modified by the amount of fluid effused during the second period, and again during the absorption of the fluid in the third stage. The intensity of the inflammation may be in ratio to the severity of the pain.

In some cases, however, pericarditis may run its course with but little pain or febrile movement attendant. But this is equally true of inflammation in any organ, especially in the serous tissues.

The symptomatology of pericarditis is best treated of by taking it up in the following order, namely: The symptoms relating to the heart, and afterwards those referable to the circulatory, respiratory, and nervous system.

Symptoms referable to the heart, (1) *pain,* (2) *tenderness,* (3) *palpitation.*

Pain referred to the praecordia is a prominent symptom in some cases. It is generally burning, lancinating, and often accompanied by a sense of constriction. It is aggravated by inspiration and the movements of the body. The pain is sometimes felt in the epigastrium, or to the right side, or the centre of the sternum. It may extend to the back, to the left shoulder, and down the left arm, as in angina pectoris. The pain much resembles the pain of pleurisy, with which pericarditis may be confounded. The two diseases may, however, exist at the same time; so also may pleurodynia and intercostal neuralgia. But *pain* in pericarditis may be very slight, or altogether wanting. Dr. Flint says, in the larger number of cases observed by him, the pain was very slight.



It is a disputed question on what the pain depends. Bouilland attributes it to co-existing pleuritis. Flint refers it to the nerves of the heart. Inman says it is a myalgia of the thoracic muscles.

When pain is present it belongs to the early part of the disease. When the inflamed surfaces are covered with lymph, or are separated by liquid effusion, it diminishes or disappears, leaving only a sense of uneasiness in the praecordia.

Tenderness on pressure is generally present, but, like pain, varies in degree, and is rarely very marked. Hope says it may be discovered by pressing on the epigastrium beneath the cartilages of the ribs, in a direction toward the heart, when it is not apparent directly over the heart. Flint asserts that in order to constitute a symptom of pericarditis it must be limited to the region of the heart. If tenderness is diffused, it indicates the presence of pleurisy, or pleurodynia. It is only when taken in connection with other symptoms, that tenderness is of positive value. It is well known that in peritonitis tenderness is sometimes absent; so in pericarditis. Why this is so has not been explained.

Increased action of the heart occurs in pericarditis in the early part of the disease. The contractions are violent, and sometimes irregular, and the patient is conscious of an unnatural beating of the heart. This symptom, however, is by no means constant, and of itself is of little value, because it is found in functional disorder and organic disease.

If, during the occurrence of rheumatism, tumultuous action of the heart is noticed, it should lead to a careful examination.

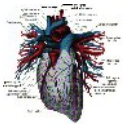
In the stage of liquid effusion, palpitation cannot occur to any degree, and if the effusion is absent the heart is so

weakened in the second stage as to make palpitation almost impossible,

SYMPTOMS OF THE CIRCULATION.

The *pulse* alone, in this disease, does not furnish positive diagnostic information, but when the diagnosis is made, it aids us in judging of the condition of the heart. At the outset of the disease it corresponds to the increased muscular action of the organ, and is strong, quick, and vibratory, more or less frequent, and sometimes irregular.

As the heart becomes weakened the pulse becomes enfeebled; and when, together with a certain amount of paralysis, there occurs liquid



effusion, the pulse becomes weak and small, with greater disturbance of rhythm.

Walshe says that the frequency of the pulse "is subject to more sudden variations from the influence of emotional excitement and effort in this than in any other disease." He adds, that he has known a gentle movement of the trunk to raise the pulse from 80 or 90 to 130 or 140.

But to the above statements there are many exceptions. Even in the first stage it may not be more frequent than in health. Graves says it is often " less frequent." It may even continue regular, and in no way abnormal.

Lividity of the lips, face, etc., may be due to a weakness of the heart, and belongs to the second stage of the disease, when it denotes serious obstruction. It is attended with feeble and irregular pulse.

Lividity is caused by congestion of the venous radicals, but generally involves some affection of the pulmonary system co-existing with pericarditis. The deficient aeration of the blood by the lungs may in such cases cause lividity. This symptom is not therefore very important as a diagnostic sign of pericarditis.

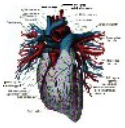
RESPIRATORY SYMPTOMS.

Respiration is sometimes accelerated in pericarditis in consequence of the inspiratory acts being shortened by the praecordial pain, and, in such cases, dilatation of the *aloe nasi* may be observed, the dyspnoea may be dependent on congestion of the lungs, incident to compression of the heart by liquid effusion, but it may be absent even when the pericardial sac is largely distended. But this symptom is not always present, for the respiration may be unaffected, or only accelerated by the febrile movement.

Cough, dry, hacking, or spasmodic, is common, and may exist independent of any pulmonary disease. It may, however, be absent in all stages. When a dry, short cough is associated with orthopnea, a frequent and feeble pulse, and lividity of lips and face, it denotes imminent danger.

The *voice* may be very weak, the patient being unable to speak, except in feeble tones and with great effort. This symptom seems to be connected with copious effusion.

GASTRIC SYMPTOMS.



Vomiting is sometimes present and persistent, and may lead us to a faulty diagnosis in mistaking the attack for gastritis.

Dysphagia occasionally occurs, and was first noticed by Testa, an Italian author.. It may be a spasmodic affection, or due to pressure of the distended pericardial sac upon the esophagus.

SYMPTOMS OF THE COUNTENANCE, POSITION, ETC.

An expression of *anxiety,,* or apprehension, is often a prominent symptom. The *risus sardonicus* has been observed in seven cases which terminated fatally. The *position* of the patient is generally on the back, or diagonally, between that on the back and on the side. It is rarely on the left side,, the liver in this position pressing on the heart. In some cases the patient can lie comfortably on the right side. Generally, the patient desires to have the head and shoulders raised. But whatever position the patient selects he is *very reluctant* to change it, owing to the great increase of the pain or distress, and the excitement of the heart, which gives rise to a feeling of syncope, especially when the sac is filled with fluid. Fatal syncope has been induced by change of position. Flint refers to several cases, and I have observed it to occur in one case of rheumatic pericarditis, and in several cases where cardiac disease was complicated with diphtheria.

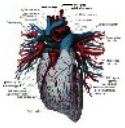
SYMPTOMS OF THE NERVOUS SYSTEM.

In addition to the mental anxiety, depression, and fear of death observed in cases of pericarditis, actual delirium may exist. It has not been considered an element of the disease.

There are, however, cases of pericarditis in which the cerebral symptoms are so marked that they may mask the cardiac inflammation. These cerebral symptoms may simulate meningitis, mania, dementia, coma, epilepsy, tetanus, and chorea. In many cases of supposed cerebral disease terminating fatally, autopsy shows no appreciable lesion of the brain and spinal cord. But if the examination had included the heart, pericarditis would have been found to have existed.

Dr. Burrows[1] was the first to call special attention to this connection of cerebral symptoms with cardiac disease. Dr. Flint alludes to several interesting cases of a similar character which came under his

[1] "On Disorders of the Cerebral Circulation and on the Connection between Affections of the Brain and Diseases of the Heart."



observation. These two authors show conclusively that the physician may mistake an inflammation of the pericardium for an inflammation of the brain. In the 16 cases detailed by Burrows there occurred delirium, convulsions, agitation of the limbs resembling chorea, dementia, coma, and seizures resembling apoplexy and tetanic spasms. Flint's cases had delirium, with wild, staring expression, inability to protrude the tongue, shouting as if from danger, coma, great agitation, blindness of one eye, etc. One patient " ejected saliva with great force, and in all directions."

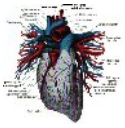
Several cases have come under my own observation. One very notable case, in a girl eight years of age. The symptoms all simulated meningitis, and it was only when my attention was called to the heart by the full and very irregular pulse, that physical examination disclosed the presence of pericarditis.

Flint says the delirium is peculiar, " the patient lying in a species of coma vigil, the eyes open and fixed in one direction, not replying to questions, and incapable of being roused ; this state was followed by maniacal excitement, the patient shouting, and apparently laboring under fear of harm, with occasional ebullitions of hilarity. A fixed delusion of having committed some crime appears to be a distinguishing feature."

From the above symptoms — and this peculiar delirium does not occur in meningitis—and also the absence of acute pain in the head, throbbing of the carotids, injection of the eyes and face, we may know that the disease is not cerebral. The delirium resembles somewhat *delirium tremens,* in which condition the heart is often much disordered. This fact may lead us to understand the curative action of *digitalis* in *mania a potu.*

I wish to call attention to a fact which Flint has not mentioned, namely, the disordered action of the heart in idiopathic brain affections. In some cases of meningitis, and nearly all cases of *tubercular* meningitis, the pulse is at first full and irregular, afterwards soft and fluttering, then intermitting, irregular, full, slow and labored, easily quickened by motion or mental disturbance to double its previous amount of pulsations.

'When we reflect that these symptoms also occur in pericarditis, we shall admit that it may be possible for the physician who neglects physical examinations to make a wrong diagnosis. I hare seen cases of tubercular meningitis in which the beating of the heart and the character of the pulse simulated pericarditis. The physical signs on percussion were, however, wanting. In such cases the disorder of the heart was functional, or reflex, the nervous irritation being transmitted through the phrenic and pneumogastric nerves, just as in reflex disorder of the brain from



pericarditis, but in a contrary direction. I will here remark, that for brain symptoms arising from diseases of the heart, *digitalis* is generally specific; but if the contrary obtains, it is *not* indicated.

PHYSICAL SIGNS OF PERICARDITIS.

The symptoms of acute pericarditis above enumerated are not alone sufficient to enable us to diagnose with certainty the presence of that disease. But by means of the physical signs obtained by percussion, auscultation, palpation, inspection, and menstruation, the disease may now be generally recognized with a degree of positiveness which clinical observers, not many years ago, regarded as unattainable.

Instead of entering into a profuse description of these signs occurring in pericarditis, I shall take the liberty to present the admirable summary given by Dr. Flint, in his work on Diseases of the Heart :

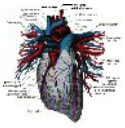
PERCUSSION.

"Enlarged area of praecordial dullness; the extent of this area greater in a vertical than in a transverse direction; its shape corresponding to the pyramidal form of the pericardial sac when distended; the dullness within this area, and the sense of resistance on percussion greater than over the praecordial region in health, or in cases of enlargement of the heart. These signs denote an abundant effusion within the pericardial sac.

"Moderate or small effusion denoted by increased width of the area of dullness at the lower and middle portions of the praecordial region. The increase of the area of dullness taking place within a few *days* or hours, and progressing rapidly; its extent varying on different days during the course of the disease. Dullness from the presence of liquid below the point of the apex-beat of the heart. Diminution of the area of dullness, with more or less rapidity in the progress of the disease toward convalescence, and its final reduction to its normal limits; when convalescence is established."

AUSCULTATION.

" A friction sound developed, usually, soon after the commencement of the inflammation, depending on the exudation of lymph; rarely wanting during the period of the disease which precedes that of liquid effusion; frequently, not invariably, disappearing during the period of effusion ; often returning after the absorption of liquid, and sometimes persisting after adhesion of the pericardial surfaces has taken place. Intensification



of the heart sounds at the commencement of the disease, or prior to liquid effusion; during the period of effusion, both sounds weakened, but especially the first sound^ the element of impulsion in the first sound notably impaired or lost, and this sound, therefore, consisting of the valvular element alone, resembling the second sound as regards quality and duration; the sounds apparently distant, and the apparent distance greater when the patient is recumbent on the back.

"Cessation of respiratory murmur and vocal resonance, concurring with the results of percussion, in determining the enlarged area of praecordial dullness dependent on distension of the pericardial sac."

PALPATION.

"Prior to the period of effusion, the cardiac impulse abnormally forcible, violent, extending over a larger space than in health, and sometimes tumultuous beating of the heart. After effusion, the point of apex-beat raised, and carried to the left of its normal position. Suppression of the apex-beat, if the quantity of liquid be large. Return of the beat when the liquid diminishes. Vibration of the thoracic walls in the praecordia before, and sometimes after the period of effusion, constituting tactile friction—fremitus. Retardation of the apex-beat in some cases, after a certain amount of effusion, so that the first sound precedes it by a distinct interval."

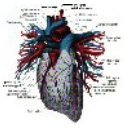
INSPECTION

"Prominence or arching of the praecordial region in some cases during the period of effusion, if the pericardial sac be distended, observed chiefly in young subjects; the prominence presenting an indistinct outline of the pyriform shape of the pericardial sac. Restraint of the respiratory movements of the left side, if the quantity of liquid be large, and also, prior to effusion, in some cases, from pain felt in the act of inspiration. Undulatory movements in the intercostal spaces over the pericardium distended with liquid, in a very small proportion of cases. Depression of the praecordial region in some cases, after the absorption of liquid."

MENSURATION.

"Prominence of the praecordia in some cases, produced by liquid accumulation in the pericardia] sac, determined by calipers. Sudden development, or increase of prominence, and its sudden or rapid disappearance."

DIAGNOSIS.



If the physician depends altogether upon the *symptoms* supposed to indicate pericarditis, he will find the diagnosis of the disease to be difficult, and often impossible. It has been shown that cases may occur which do not show symptoms of a positive character. It is only since the discovery of physical exploration, that the diagnosis is made comparatively easy. But since this method is still neglected to much extent, pericarditis is habitually overlooked by many medical practitioners.

There are many diseases having pathological relations to pericarditis, and during the progress of those diseases we should be on the watch for the earliest evidence of its development. During the progress of *acute rheumatism* the praecordial region should be daily explored with reference to the signs of pericarditis, as well as endocarditis. We may, in such cases, discover the friction-murmur before the patient. makes any complaint of pain or other symptoms denoting that the pericardium has become involved.

In view of the fact that inflammation of the pericardium as well as other serous structures, is liable to be developed in patients affected with *disease of the kidneys,* we should not neglect to examine the chest from time to time.

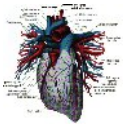
The diagnosis of pericarditis from *pleuritis* or *pneumonia* is sometimes difficult. In such instances the heart should be closely interrogated.

We may hear a friction-murmur in pleuritis, produced *outside* the pericardial sac. It will be found difficult to discover the presence of liquid effusion in the pericardium when, at the same time, it exists in the *left* pleural sac; while, if the effusion is in the right pleural cavity, we can readily distinguish it from pericardial effusion.

Flint says that he has known acute uncomplicated pericarditis to be considered and treated, throughout the disease, as pleurisy, when the diagnosis was based on *symptoms* alone, and I have no doubt but such instances are very numerous, too numerous in fact for the dignity and honor of medical science.

Dropsy of the pericardium may be mistaken for the stage of pericarditis with effusion. But the former rarely occurs except in connection with general dropsy, and then not to the same extent as in pericarditis. Moreover, hydro-pericardium is not preceded by pain, tenderness, fever, etc., nor is it attended by the friction-murmur.

PROGNOSIS.



Pericarditis is always a serious affection, and its progress should be watched with great solicitude. In no disease must we attend so closely to the development of the various stages.

Different observers vary in their testimony as to the fatality of the disease. Dr. Hope declared that in ten years he did not lose a case. Of 106 cases analyzed by Louis, 36 died. In 84 cases reported by Latham, only 8 died. Of. Dr. Flint's 50 cases, 27 died ; but these were unusually bad cases variously complicated.

According to Flint, pericarditis is least fatal when rheumatic; more dangerous when occurring during renal affections, eruptive and continued fevers, pyaemia; and generally fatal when associated with marked disorder of the nervous system, giving rise to mania, tetanus, chorea, etc. Under judicious homoeopathic treatment this rate of mortality would probably have been less. Dr. Russell's success in the London Hospital was certainly very satisfactory.

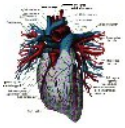
The *duration* of the disease is variable. It may prove so rapidly fatal as to kill in 24 hours. . It lasts usually from one to two weeks, and, if not ending fatally in this time, ends in recovery, or the chronic form.

The termination, in favorable cases, is more or less adhesion of the pericardial surfaces. Flint considers it doubtful if the exudation is ever completely removed by absorption —leaving the surfaces unattached and free from disease. He also considers it *the* rule that the pericardial sac is obliterated, from adhesion throughout its entire surface. Of 156 cases of pericardial adhesions analyzed by Louis and Chambers, 111 were universal.

Death occurs in pericarditis from arrest of the circulation, from paralysis of the heart, from the combined effects of the pressure of the liquid effusion and the proximity of the inflamed membrane to the muscular fibres of the organ. It must be remembered that death from the slightest overexertion may occur during the stage of effusion.

TREATMENT.

The treatment of inflammatory cardiac affections has not yet received that careful study in our school which their importance demands. Notwithstanding this, we can safely assert that our treatment is far more successful than that of the allopathic school; or, with greater propriety it might be said, than the *former* treatment by that school, which consisted of blood-letting, calomel, blisters, opium, etc. The allopathic treatment, as at present adopted by its best practitioners is far more rational than



ever before—>-it is even homoeopathic—as witness the treatment advised by Dr. Flint, who discards blood-letting altogether, and says of, mercury, that it should not be used in Bright's disease, anemia, or any cachectic state; and other authors deny its efficacy in idiopathic or rheumatic pericarditis. Flint says of opium, that it is a very important and valuable remedy, but he relies more upon *aconite* and *digitalis* than any other agents, and these he uses in a strictly homoeopathic manner.

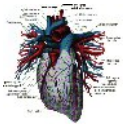
If the homoeopathic school is limited to a few remedies, it is because our provers have not paid sufficient attention to objective symptoms. In but few of our provings has any proper record been made of the cardiac symptoms developed. The objective symptoms have been neglected, and the subjective only vaguely recorded. Not only this, but even in the few reported clinical cases of heart-disease found in our literature, no physical exploration of the chest was made, to confirm the diagnosis, and in many cases we are in doubt whether they were really cases of disease of the heart.

The following are the chief remedies to be selected in *pericarditis :*

Aconite. The symptoms of the aconite-heart-disease are prominent and unmistakable. It is indicated in the *first* stage of the disease, or until the exudative process is completed. It is not so often indicated in the second stage—or stage of liquid effusion—and rarely in the third stage. The action of aconite is twofold. Primarily, in large doses it depresses the vitality of the heart even to the point of paralysis. But the reaction which occurs is a secondary effect, and results in hyperemia and inflammation; but this inflammation does not go to the extent of causing liquid effusion, nor does it cause organized exudation of lymph. The following are the symptoms for which it is indicated in the first stage:

The beats of the heart are more violent and rapid; the pulse hard, strong, and *contracted (not* full and bounding). The pain, if any is felt in the cardiac region, is burning, lancinating, and constrictive, or stitching. There may be tenderness on pressure over the cardiac region, or in the epigastrium under the ribs. The skin is very hot, with burning and intense thirst. The urine scanty and red. The countenance expresses great anxiety, and there is always

present a fear of death. The position of the patient is on the back, with the head and shoulders raised. Any movement aggravates the pain, if any. But cases of pericarditis occur without pain, and here we must depend on physical signs. If fever is present, and the heart's action is hard and rapid, and pulse hard, and percussion and auscultation shows the first stage, then is aconite still indicated. It is *not* indicated in the



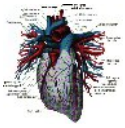
first stage of pericarditis, when the cause is Bright's disease, or pyaemia, but only in idiopathic, traumatic, or rheumatic cases.

If we expect *aconite* to act well in this stage, we must give the lower dilutions, 1st to 3rd, or even a few drops of the mother tincture in half a glass of water, a spoonful repeated every hour or two. Nor shall we find it useful after the first 12 or 36 hours. So soon as we discover the pulse to grow weaker, and the action of the heart less violent, the size of the dose must be changed, or some other remedy must be selected. Baehr says, *"Aconite* is not only indicated at the commencement of the disease, but, in many cases, during its whole course, more especially in rheumatic cardiac inflammations, so long as the organic alterations do not result in paralytic or cyanotic symptoms."

I cannot support these assertions. *Aconite* is indicated in the second and third stages, but not on account of any inflammatory action supposed to be existing, but because it is homoeopathic to threatened paralysis. Baehr himself admits this, virtually, when he says aconite is also indicated when the " beats of the heart become slower, or else they remain quick, and grow feeble or irregular; or a feeble and small pulse, not synochrous with the beats-of the heart, intermitting or unequal, the temperature is lower, and the number of respirations increase rather than decrease." But Baehr says nothing about changing the size of the dose when the symptoms change. The physician who gives the same dilution of *aconite* in the second as in the first stage will be disappointed, and do injury to his patient.

The dose in the second and third stages should never be lower than the *third* dilution, unless the powers of absorption are very feeble. These stages are similar to the primary stages of aconite-poisoning, when the cardiac nerves are brought to the verge of paralysis. The 30th or 10th is the proper attenuation to use when we give it for feeble and irregular cardiac action.

Asclepias tuberosa will be found useful in some cases of pericarditis. Its action is quite analogous to *bryonia.* The symptoms point rather to a sub-acute than an acute condition. I have used it in one such case with excellent results. The asclepias-fever is not intense, the pain in the cardiac region is pricking, there is shooting pain near the left nipple extending to left shoulder, with a feeling of constriction in the region of the heart. A dry, spasmodic cough, with some dyspnoea, is generally present. The pain in the chest is relieved by bending forward. There is palpitation of the heart, with pulse 88 and small. It is indicated in sub-acute cases, with liquid effusion, the absorption of which it hastens, and should be used in the lowest dilutions. The *asclepias syriaca* is indicated



.in similar conditions, namely, the second stage, when the disease is connected with uremia, with copious liquid effusion. Its action on the kidneys is similar to colchicum.

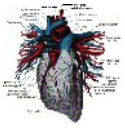
Bryonia alba is doubtless one of our most valuable remedies in the first and second stages of pericarditis. Its action begins when the exudation of plastic lymph appears, and as this often occurs very soon, it is best to alternate it with *aconite,* or follow closely after that remedy. It is indicated in those cases of idiopathic or rheumatic pericarditis, with or without pleurisy, with intense fever, frontal or occipital headache, and acute stitching pains aggravated by the slightest movement. I do not consider it the best remedy in cases of liquid effusion, nor does it do any good in cases of feeble, irregular, or intermittent cardiac action. The heart's action is not violent or tumultuous, but the friction murmur is always heard, dullness on percussion is present, the point of apex-beat raised and carried to the left, and the heart's sounds intensified (at first), then both sounds weakened. It is of no value in pericarditis from Bright's disease or pyaemia, nor when the effusion is copious, and aeration of blood deficient.

Arsenic. The testimony relating to the efficacy and applicability of arsenic in pericarditis is quite conflicting. Baehr Bays, " we have never seen any good effects from it in acute conditions. It is a remarkable fact that among the large number of cases of poisoning by *arsenic, post-mortem* examinations have never yet revealed a single symptom that might lead us to infer that *arsenic* exerts a specific action upon the heart."

Dr. Russell, on the contrary, asserts that *arsenic* exerts a powerful influence on the heart and lining membranes, both internal and external. He quotes Orfila, who found "small spots of a bright crimson color in the left ventricle and on the columnae carneae, and this color penetrated deeply into the substance. The right cavities presented spots of much deeper red—almost black color." But he did not find the serous membrane inflamed.

If *arsenic* is homoeopathic to pericarditis, it is to that variety caused by uremia or pyaemia, in which conditions the nervous life of the organ is poisoned. It may be homoeopathic to carditis, and also to the second stage of sub-acute or chronic pericarditis, with serous or liquid effusion, associated with great irritability and tendency to paralysis.

The symptoms indicating arsenic are: great anxiety in the region of the heart, with fear of death; tightness in the praecordia;' cannot lie down ; dyspnoea and palpitation after the slightest motion; great thirst; violent, tumultuous action of the heart, *alternating* with feeble, irregular beating;



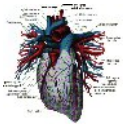
tendency to fainting'; pulse strong and jerking, or feeble, fluttering, and irregular; cold skin, hands, and feet. The pain is piercing, burning, and a sensation of soreness in the region of the heart.

The physical signs on percussion and auscultation are: dullness over a greater extent than usual in the cardiac region, especially in a vertical direction; the element of impulsion in the first found is impaired or lost, the sounds apparently distant. *

The *iodide of arsenic* will doubtless prove a superior remedy in such cases. *Dose,* the 3rd or 6th trituration.

Digitalis is one of the most useful remedies in pericarditis, but in order to use it successfully you must fully understand its sphere of action. Not only this, but you must know how to graduate-the *dose* to suit the varying phases of the disease.

I will first give you the opinion of Baehr, and then my own. He says, " Since I have devoted, for years past, special attention to the use of this drug, I have found it much more frequently applicable in the treatment of disease than in former times; and I am now prepared to assert most positively, what I was then only able to announce in rather dubious language, that *digitalis* is an excellent remedy in acute diseases of the heart, more particularly in *pericarditis. Digitalis* is not so much adapted to inflammations setting in with very violent symptoms, but to inflammations approaching in an insidious and scarcely observable manner, more especially without any local pain, but with a rapidly increasing embarrassment of the respiration. We should take a very one-sided view of the action of this drug, if we were to regard the irregularity and slowness of the pulse as the chief criterion for its application, since a rapid and very weak pulse constitutes an equally reliable indication. Even a violent excitement of the functional activity of the heart,. as generally occurs at the commencement of cardiac inflammation, is in characteristic accord with the first symptoms of poisoning by *digitalis.* Among all the various forms of cardiac inflammation, we consider the rheumatic form the best adapted to *digitalis,* and likewise if it is associated with a copious effusion of serum; less, however, in pericarditis, if the friction murmurs continue unchanged from the beginning of the disease. The sooner these murmurs disappear, the better is *digitalis* adapted to the case. * * Among the general symptoms, the following invite more particular attention to the use of *digitalis:* Rapidly increasing dyspnoea, with occasional symptoms of acute congestion of the chest; inflammation of the pleura or lungs; bronchitis; chronic catarrh of the bronchia; expectoration mixed (not streaked) with blood; spasmodic cough; livid, turgescent face, with blue lips, headache,

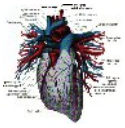


vertigo, delirium, sopor, vomiting, at the commencement or during the course of the disease; hyperemia of the liver; slight icterus; catarrh of the kidneys; excessive feeling of illness, not corresponding with the perceptible symptoms; great anxiety, but without any continual restlessness; aggravation by the slightest motion; a drawing, tearing pain in left shoulder."

Dr. Baehr's experience coincides with my own. In my several papers on the action of *digitalis* I have always contended for the double action of this drug, and unless such action 13 fully understood, you cannot prescribe it successfully. In its primary action, *i.e.,* its pathogenetic effect in large doses, it first causes a hyper-stimulation of the cardiac tissues, manifested by increased force, and *sometimes,* not always, frequency of the heart's action; and this may go on to the very verge of acute inflammation, or to a condition of the heart culminating in tetanic spasm of that organ. *Digitalis* is not so much indicated in acute as *sub-acute* pericarditis, in its first stages. It is not indicated for plastic exudation, but only for serous effusion; and not' so much for the inflammation itself, as its results, and the excessive irritation of the cardiac nerves which attends it. If given in the first stages the doses must be made very small, not lower than the *third* decimal dilution. It is very important to understand the secondary action of *digitalis.* After it has exhausted the nervous and vascular irritability of the heart by its primary action, a contrary condition sets in. The heart's vitality is lowered, its pulsations decrease in *force,* but increase in frequency, or become very irregular and intermittent; the slightest motion or excitement increases the heart's action in a very distressing manner, and death may occur from cardiac paralysis.

You will observe that Baehr mixes the primary and secondary symptoms and conditions in *his* indications. This is unfortunate, for if the practitioner does not separate the two states, he will forever be in the dark regarding the true action of the drug, and never be able to prescribe it with safety and benefit to his patient.

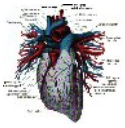
I have given you the symptoms and conditions indicating *digitalis* in the first stage of pericarditis, and the dose required. Its most useful sphere, however, is in the second and third stages, or those conditions characterized by liquid effusion, failure of the nervous and muscular power of the heart, from paresis or over-distension, and accompanied by excessive irritability. The physical signs in this condition are: absence or decrease of the friction-murmur; rapidly increasing dullness over a large area; heart-sounds weakened,



especially the first, the element of impulsion in the first sound nearly or entirely lost, the sounds apparently distant. The posture is generally with the head and shoulders raised. The patient cannot lie on the left side, the slightest movement increases the distressing dyspnoea. Sometimes the urinary organs are affected, and urination becomes frequent and painful—the secretion scanty, but of nearly normal color. An excessively *faint* " empty " feeling at the pit of the stomach is a notable indication for *digitalis.* Under its use the effusion rapidly diminishes; the heart's action soon improves in force; its irritability diminishes with the increased tonicity; the lividity of the face and lips disappears, as does the dyspnoea, vertigo, and imperfect circulation everywhere. But in order to effect this curative action, you must know the requisite dose. Any attenuation above the third decimal is useless. The tincture, or first decimal, is usually required, and must be given in doses of one to five drops every hour or two until decided improvement sets in, when the intervals between the doses may be lengthened, or the quantity decreased. I have frequently found the patient so near cardiac syncope, that I have without hesitation given *ten* drops of the strongest tincture, and, with my finger on the pulse, watched its effects. If the pulse did not rise, of increase in force in fifteen minutes, the dose was repeated, and this was continued until I was satisfied the dangerous exhaustion was over. In such cases of threatened or actual collapse, you may think *veratrum album* or *arsenicum* better indicated, but neither are as reliable as *digitalis.* After you have warded off the immediate danger, prescribe the *digitalis* in smaller doses, and place the patient under the influence of wine-whey, egg-nogg, beef-tea, cocoa, and other highly nutritious articles.

Spigelia is an important remedy in pericarditis, but the provings were conducted with such disregard for physical or objective symptoms, or even correct subjective symptoms, that it is difficult to define clearly its curative sphere.

Baehr says the symptoms given by him are not pathogenetic but clinical, and even these " do not contain the symptoms of sero-plastic or serous pericarditis. On the other hand we distinctly recognize in this complex of symptoms, both the purely *plastic,* as well as incipient endocarditis." He further adds that " according to practical experience, *spigelia* is particularly adapted to rheumatic pericarditis, likewise to sero-plastic pericarditis during its whole course, especially if the patient complains of internal local pain; " but he asks " upon what basis are we to prescribe spigelia in cases where the disease is painless and has scarcely any symptoms ?"



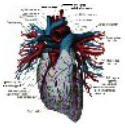
He gives the following symptomatic indications from Hartmann; indications which are based on curative results on the sick, namely: "Undulating motion of the heart; indistinct beats of the heart running into one another; when laying the hand upon the heart, tumultuous beating of the heart, in a recumbent as well as in a sitting posture, not synchronous with the radial pulse; spasms of the chest; suffocative complaints; tremulous sensation in the chest and temples, increased by motion ; tearing sensation in the .chest when raising the arms over the head, and when touching the pit of the stomach; purring murmur during the beats of the heart; stitches in the region of the heart; pulsations of the carotids with a tremulous motion; great dyspnoea at every change of position; bright redness of the lips and cheeks, changing to pallor during every motion; the impulse of the heart raises the four last true ribs, the sternum and xiphoid cartilage, and displaces the dorsal vertebrae; audible beating of the heart, causing a pain that is felt through to the back; cutting pains from the heart to the shoulders, as far as the head and arms; excessive dyspnoea, with a pressing, cutting pain in the abdomen, at the insertion of the ribs; arthritic pains and stiffness of the joints; dull stitches where the beats of the heart are felt, and recurring with the measured regularity of the pulse; the beats of the heart can be felt through the clothes, with anxious oppression of the chest; scraping in the throat, affection of the tracheal and bronchial mucous membranes; the beats of the heart are not synchronous with the pulse; purring murmur." (Dose, 3rd to 12th dilutions.)

Nitrum (kali nitricum) ought to prove curative in some cases of pericarditis, especially if it appears as a complication of acute rheumatism or B right's disease. It has many symptoms which indicate its use in cardiac inflammation.

Gelseminum is rarely indicated in acute inflammations of the heart. It may be useful in the *first* stage, and for a very short time. It is useful in cases having a *catarrhal* origin; rarely, if ever, in rheumatic pericarditis; and never when from diseases of the kidneys.

The symptoms calling for its administration are: chilliness, then fever, with feeling of dullness, heaviness and swimming in the head (occiput); stitching sensation in the region of the heart; constrictive pain around the lower part of the chest; sudden attacks of suffocation; inspiration of a sighing and catching character; expirations sudden and forcible; heart's sounds intensified; pulse full, rapid, soft.

For these symptoms the proper dose lies below the 2nd dilution. *"No* result will be gained in inflammatory affections if the higher attenuations are used. Its administration should not be continued after the pulse



becomes slower and softer, unless we change the dilution to the 6th or 12th, for if indicated in the third stage, it is for the tendency to paralysis of the heart, which is a primary effect of the medicine.

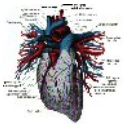
Veratrum viride. The same remarks are applicable to this medicine that have been applied to gelseminum. It may, however, be given in those cases of idiopathic or rheumatic pericarditis that are ushered in by violent fever, full, hard, bounding pulse, with congestion to the head, throbbing carotids, etc. The pain is burning, constant, with oppression of the chest; sensation as of a heavy load on the chest; heart's action violent and tumultuous; respirations rapid, labored, and sighing. *Dose,* 1 drop of the tincture, or first decimal dilution, repeated every two hours.

Unlike the *veratrum alb.,* it cannot be used in the second or third stages, unless we have the rare phenomena of vomiting, cold skin, pulse 20 or 30, and here it must be given in the 6th: dil.

In cases of poisoning by *verat. v.* (in cats) serum to the amount of 1 to *15 drops found* in the pericardium.

Colchicum has been recommended for pericarditis, especially rheumatic. Baehr says, " it seems to us to be improperly ranked among cardiac remedies." In cases of poisoning, no pericardial lesions were observed; in fact the pericardial sac was found *empty.* Muller, however, says that *colchicum* is more suitable for pericarditis than endocarditis. Baehr asserts that all the heart-symptoms are secondary from loss of fluids. In Laurie's Practice a case is reported where colchicum removed the following symptoms (after *lachesis.* and *arsenicum.)*: dullness on percussion over a larger space; friction-noise at the sternum stronger than before, impulse more powerful, but the natural heart-sounds impaired and distant; great dyspnoea and faintness on the slightest movement; oppression after eating or drinking ever so little; no cardiac pain; position on the back, with head and shoulders raised." This would seem to prove that it was useful in the second stage. It is probable that the best indication for *colchicum* in pericarditis is the co-existence of rheumatic inflammation elsewhere, and the urinary symptoms indicating that medicine.

Dose: The dilutions from the 1st to the 6th *Tartar emetic,* according to Russell, is a good remedy in some cases of rheumatic pericarditis, and for the following urgent symptoms: " *Great dyspnoea,* and violent pain at the heart, with cough." But he evidently does not believe it to be a specific remedy, but removes this dyspnoea, etc., by its action on the lungs, and its effect on "the pulmonary branches of the pneumogastric nerve, by sympathy with the cardiac."



Dose: Grain doses of the 2nd or 3rd dec. trituration.

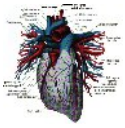
Kalmia latifolia. Of this remedy Hering says, *"No* remedy in the whole materia medica has such control over the pulse, except *digitalis."* "In diseases of the heart which alternate with rheumatism, or have originated in rheumatic attacks, Kalmia must become important." *"No* clinical reports have been made to substantiate this statement, nor do we know of any reliable symptoms of the medicine indicating its use. If useful at all, it is in the first stage.

Cactus grandiflorus was strongly recommended by Dr. Rubini for " all inflammatory affections of the heart." . He does not, however, mention pericarditis among his clinical observations, but says it cures pleurisy and inflammations of serous membranes. If homoeopathic to pleurisy, it is probably also to pericarditis. The symptoms seem to indicate its tendency in that direction : " Sensation of constriction of the heart. Dull, heavy pains in region of the heart, increased by external pressure. Pricking pain in the heart, impeding respiration and motion of the body. Very acute pain, and such painful stitches in the region of the heart as to cause him to weep and cry out loudly, with obstruction of respiration. Palpitation of the heart continues day and night. Fever, with great heat, violent pain in the head," etc. It is to be greatly regretted that Dr. Rubini made no observation of the pulse, or examined the condition of the heart by physical exploration. Such neglect is a loss to science, and utterly unpardonable. Cactus may be indicated in any stage of pericarditis, and the best effects have been obtained from the lowest dilutions.

Cannabis. Baehr seems to confound the cannabis *indica* (hashish) with *cannabis sativa,* which latter possesses, in no degree, the cerebral symptoms of the former. *Cannabis sativa* has been recommended in pericarditis, but upon very unreliable data, Baehr gives the following symptoms of *cannabis indica:* "Violent palpitation of the heart, sometimes without any anguish, sometimes attended with perfect agony." It is indicated in cases of pericarditis with cerebral symptoms. *Dose,* 1st to 3rd dilution.

Sulphur has not usually been mentioned in connection with pericarditis, but its pathogenesis contains many symptoms relating to the heart. From analogy, however, I claim that it ought to receive more attention as a cardiac remedy.

You have been taught how useful it is as a remedy in pleurisy, in the stage of exudation, also its power over obstinate inflammations.

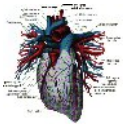


Its action on the pericardium is doubtless the same as on the pleura. If it will cause absorption of plastic lymph in one serous membrane it will in any other. Baehr mentions " a case of pericarditis where uncommonly loud friction murmurs and a rubbing of the pericardial surfaces against each other, that could even be felt by the hand, and had already existed for upward of three months, disappeared entirely after sulphur had been given for a fortnight." You may give sulphur with great confidence where there is plastic exudation, if the inflammation seems to linger, notwithstanding the free use of bryonia. (Dose, 1st to 30th.)

Iodine, or *iodide of potassa*—I prefer the latter—will be found useful in cases quite similar to those for which I have recommended sulphur. Iodide of potassa has great power in causing absorption of morbid products. It removes the plastic and serous exudation in pleurisy and pericarditis. The pathogenetic symptoms recorded in the *Symptom Codex* are very suggestive, and closely simulate the pains of pericardial inflammation. (Dose, one-half to two grains in an ounce of pure soft water every four hours.)

The alkaline treatment, although not dynamic, but chemical in its nature, has some claims upon your attention. The theory advanced in its support is this: alkalis are supposed to exert their effect by neutralizing the *materies morbi* in the blood, and also to eliminate them from the body. The bicarbonate of potassa or soda are the alkalies preferred, and it is considered necessary to give as much as throe or four drams daily, until the urine becomes *alkaline.* It is claimed by Fuller, that rheumatic pericarditis may be prevented if the alkaline treatment is carried to this extent. Dr. Richardson's researches appear to substantiate this assertion, for- of 48 cases in which the "full alkaline treatment" was employed, the heart was affected in but *one* case. He contrasts these with 110 cases treated by bleeding, nitre, mercury, etc., where the heart was affected in 35. Flint, however, says he has known cases in which pericarditis occurred during the " full alkaline treatment," and after alkalinity of the urine had been produced. Dr. Russell (homoeopathist), in his Clinical Lectures on Rheumatism, approves of the alkaline treatment, and says that it cannot interfere with the action of specific remedies. He believes that we ought to neutralize and eliminate the lactic acid, and thus remove the cause. He also believes 4hat both *aconitc* and *bryonia* act by removing the cause which develops the lactic acid, and in this way, perhaps, act as curative agents in rheumatic affections.

I have frequently tested the value of the alkaline treatment, and believe acute rheumatic affections generally run a shorter course under such treatment. You may give ten or twenty grains, or more, of the bicarbonate of soda or potassa, or the citrate of potassa, largely diluted with gruel or



pure water, three or four times a day, until the urine becomes alkaline, which condition is readily ascertained by testing that secretion with litmus paper.

RECAPITULATION.

For *pericarditis,* as a complication of acute rheumatism, the remedies are, *aconite, gelseminum, veratrum viride, asclepias tuberosa, bryonia, cimicifuga, colchicum, cactus, nitrate* and *iodide of potassa, digitalis, spigelia,* and *sulphur.*

For *pericarditis* from Bright's disease, *arsenicum, phosphorus, kali nitricum, colchicum, asclepias syriaca, digitalis,* and *benzoate of ammonia.*

For *pericarditis* from pyaemia, *arsenicum, baptisia, phosphorus, carbolic acid,* and the *sulphite of soda.*

For threatened *cardiac paralysis, digitalis, veratrum album, lachesis, naja, gelseminum, aconite, veratrum viride,* and *arsenicum.*

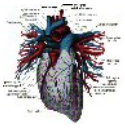
For pericarditis, with *pneumonic* complication; *phosphorus, tartar emetic, kali nit., sanguinaria, bryonia, veratrum viride ;* with pleurisy; *bryonia, asclepias tuberosa, arnica, iodide of potassa, sulphur* ; with cerebral irritation, *cannabis ind., veratrum alb., cimicifuga, belladona, digitalis,* and perhaps *opium.*

For *hydropericardium,* or copious effusion of serous fluid, *digitalis, arsenicum, colchicum, apocynum cann., benzoate of ammonia, nitrate* and *iodide of potassa, iodide of arsenic,* and perhaps *apis mel.*

DIETETIC AND HYGIENIC TREATMENT.

During the first or acute inflammatory stage, the diet should consist of the lightest kind of-food. Cardiac inflammations do not exhaust the general system as much as other inflammations, and less food will sustain the vital forces. All stimulating or highly nutritious food and beverages should be prohibited. Mental and bodily exertion must be avoided as much as possible.

In the stage of effusion, when the heart becomes weak and irritable, the only change in diet and regimen you should advise, would he to permit light soups and broths, or weak beef-tea, if the patient desires them. In this stage *tea* should be strictly prohibited, and absolute mental and physical repose insisted upon. In threatened paralysis you may



administer cautiously alcoholic stimulants, beef-tea, carbonate of ammonia, and even apply the electro-galvanic current in desperate cases.

If I have not fully impressed upon you the importance of insisting upon absolute quiet, and the recumbent posture, I will here repeat, that you should insist that the patient must not be raised in bed to eat, drink, urinate or defecate, nor turn on his side unaided, for any such movements in severe cases may result in fatal syncope.

External applications on the chest, over the region of the heart, may be of benefit in some cases by assisting in the reduction of the inflammation, or palliating the pain. 'Warm poultices of flax-seed meal, medicated with *tincture of aconite* or *verat. viride*—or compresses of quite warm water, may be applied during the first stages. In the latter stages, I cannot recommend you to prescribe any external application.