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Diagnosis of Thoracic Diseases
by Inspection of the body.

Inspection in its widest medical application, should comprehend the study of the configuration, state of development, and especially the physiognomical characteristics of the human body, to enable anyone to arrive at a just conclusion as to the nature of its diseases and from its appearances to form a correct diagnosis.

From this point of view, inspection necessarily includes a knowledge of physiognomy. The great importance and value of this department can scarcely be overestimated, and its universal application is unlimited.

The short space usually allotted to a thesis,
but what is of greater importance, the want of experience and of observations extending over a long period of time, prevent the medical student from doing full justice to such a subject.

To obtain a knowledge of the human features and their endless variety of expressions, and to deduce therefrom conclusions, which will enable us to establish a diagnosis with any amount of precision, we must not only study the features of solitary individuals, but we must neglect no opportunity of comparing the facial aspects of several persons when practicable, and of noting carefully in what respects they differ.

This can nowhere be done so well, and with so much benefit to the student, as in the wards of a large hospital.

Perhaps one of the greatest drawbacks to the study of physiognomy, will be found in the scarcity of treatises on the subject, and the student will be consequently deprived at first of the assistance of general principles, by which he might be guided.
in his pursuit. He will be, as it were, compelled to depend almost entirely on his own powers of observation, and as he proceeds to arrange his facts as systemati-
ically as possible.

A knowledge of the temperaments is unquestionably the best foundation upon which he may raise his study of the physis-
diagnomy of disease. From the temper-
ament he should next proceed to the dia-
atheses and obtain a correct notion of the
diseases to which those diatheses predis-
pose. This being accomplished, he will have done nearly all in his power to form a basis upon which to direct his future operations.

It is to be regretted that the importance of inspection is not more fully pointed out to the present generation of medical students. Before the application of auscultation and percussion as guides to physical diagnosis, inspection was necessarily the sheet anchor of the old physician, who frequent-
ly held it in higher estimation than a
doubtful history related by a careless and unobservant patient; and by the agency of which he was often enabled to interpret symptoms with greater accuracy, and to treat diseases with far greater probability of success.

In saying this, there is no desire to detract from the value of Auscultation and Percussion. For it would be manifestly absurd to undervalue and deprive of their immense importance, the two greatest improvements, which have been added in modern days to the means of physical diagnosis, and by the aid of which, pathological changes in structure have been more perfectly recognised during life, particularly in diseases of the thoracic viscera.

There is not the least fear that either Auscultation or Percussion will be esteemed too lightly, but rather the reverse. The young physician is, at present, much more likely to rely too implicitly on his proficiency in the use of stethoscope, pleximeter and hammer and in doing
to be led to overlook the valuable information which he may daily, hourly, indeed every moment pick up, by merely using his eyes.

At a glance it may be seen, in how few cases comparatively speaking, Auscultation and Percussion are of service. They are totally unavailable in all cases of head affections, of skin diseases, nearly so in eruptive fevers, and fevers generally and not to multiply instances, they are almost unknown in the domain of surgery. It is not by the exclusive use of any one of these means, that the medical man can hope to attain proficiency in his art: he must not lose sight of any method whereby he may be enabled to form a correct diagnosis.

In the following pages it will be attempted to point out the valuable assistance, which the medical student and practitioner may derive from a careful and well directed use of inspection of the human body in disease, and not of the body alone,
but also of its secretions and excretions. In regard to these last, we shall consider them independently of the assistance derived from the microscope and chemical reagents, which, although indispensable in order to study the pathological changes occurring in them, are not always at the disposal of the physician in the daily routine of private practice. We would rather consider them as affording evidences of the resolution of diseases and the effects of remedies. As when, for instance, a dense deposit of lithiates in the urine points out that a crisis has taken place in a fever, or as indicating the termination of an acute inflammatory attack of the lungs. Or it may happen that a crisis in a fever may manifest itself by a profuse perspiration. Again, the return of bile in the stools may indicate that bile is once more flowing into the duodenum, or the state of the salivary glands shows that the physiological action of mercury has occurred.
The character of the expectoration will always be found an invaluable aid to diagnosis and it must not therefore be passed over.

As to the division of the subject to be adopted, it will be perhaps more advisable to discuss first the inspection of the physiognomy based upon a knowledge of the temperatures and secondly the inspection of the body in thoracic diseases.
Part First.

Physiognomy of the Temperaments.

An observant traveller journeying over a wide expanse of country is at once struck by certain types of feature and form predominant in different localities. He will perceive that the inhabitants of mountainous districts possess little in common with those of the plains, and these again with the inhabitants of valleys and sea coasts.

If he be at the same time a psychologist, he also observes that their mental characteristics, habits of life, & occupations are as widely different as their complexion and robustness of form. Moreover a naturalist would at the same time point out to him, that both the number and variety of plants and animals was even more subject to changes than man himself. He would find that the men of warm climates had little resemblance to the men of cold ones. In the southern parts of Europe, he would meet with men of a dark olive complexion, having
dark hair and eyes with a general deposit of pigment under the skin. On closer examination such men would be found to possess long, oval faces, with very little vascularity of the face. Their mouths are usually small and the lips arched. The bony development generally is not great, hence they seldom attain great size of stature. The teeth are usually small and regular. The muscular system is wiry.

In the northern parts of the same continent he would meet with almost the opposite of this. There, large, bony and muscular men would appear predominant, possessing, for the most part, florid complexion with scarcely any pigment deposit.

In these there is usually great vascularity of the cheeks, the capillaries shining through the skin. The shape of the face is oval. The lower jaw is broad and massive and the teeth large, regular and covered with perfect enamel. They are characterized by great bony and muscular development, hence they frequently attain high stature.
He would recognize in the former the bilious or fibrous temperament, in the latter the sauguirine. The mental peculiarities and habits of each are striking. Men of the bilious temperament are nervous compared with those of the sauguirine. They are more excitable, impulsive, cunning, revengeful and fierce, but submitting readily to despotism. They eat little flesh and do not care much for alcoholic stimulants. Ludolcut in their habits, they are however brave and impetuous at the outset, but their courage is not enduring.

On the contrary men of the sauguirine temperament are easy and frank in their disposition and intolerant of tyranny. They are great flesh-eaters and largely addicted to alcoholic stimulants. Hence drunkenness is common among them. Out-door exercise is one of their greatest enjoyments and they have an inordinate taste for an active life.

In connexion with civilization the nervous temperament assumes great
importance. Grafted on any of the others, it modifies them to a considerable extent, and it is with these mixed temperaments that the medical practitioner has most frequently to deal. The busts of Voltaire and Pope afford striking representations of this temperament. The nervous element is predominant in them. They are characterized by their large heads and small faces. The features are finely moulded and possess great mobility. The eye is lively and vivacious. There is constant and expressive play of the mouth. The bony and muscular development in persons of this temperament is spare and they do not attain any size. Their teeth are small and regular, but when the temperament is hereditary, the upper jaw becomes contracted, and in consequence the teeth are projecting (buck teeth) and the lateral incisors overlapping. The chin is usually pointed. There is great development of the brain and nervous system in all its parts.
Mental powers great. Eminent statesmen are frequently of this temperament.

In persons of the lymphatic temperament innervation and leuquification are defective compared with either the sanguine or bilious temperaments. The red corpuscles of the blood are defective in quality and quantity in one class, and these are characterized generally by their pallid countenances and anemic appearance.

In another class there is no deficiency of the red corpuscles and these have usually florid complexions. In these there is a great tendency to the deposit of fat. This variety is sometimes described as the phlegmatic temperament. They are neither healthy nor strong.

According to Dr. Laycock, this should not be considered a temperament, but a degeneration occurring in persons of the adipose arthritic diathesis.

The subject of the temperaments has thus been briefly and very imperfectly discussed. In order to show the connexion which subsists
Lectures 1861-62.
between them and the diagnosis of diseases by inspection, it will not be amiss to consider here those diseases which are likely to affect men of the different temperaments: so that when a patient presents himself, having observed his temperament, we shall have obtained some clue as to the probable nature of his disease or as to its being asthenic or atonic.

A priori it would scarcely be reasonable to expect that persons of the sanguine temperament should experience precisely the same diseases as those of other temperaments, or if they were obnoxious to the same disease, it would not be illogical to imagine that they might be to a certain extent modified by them. And such indeed appears to be the case. Men of the sanguine temperament are prone to inflammations of a sthenic type and are found to bear blood letting well, and in them (to speak technically) there is marked tolerance of this remedy.

In consequence of the greater activity of their respiratory and circulatory organs,
they are particularly liable in advancing years, to structural lesions of those organs.

Rheumatism and Gout are essentially diseases belonging to this class of persons; and as the result of acute rheumatism, valvular disease of the heart is of frequent occurrence in middle and old age they suffer from Plethora, Pleurisy, Bronchitis, and Cardiac affections. Lastly Apeoplexy is a common and fatal complication, involving as it usually does, when not immediately fatal, Hemiplegia and other forms of palsy.

Persons of the bilious or fibrous temperament on the other hand are subject to inflammatory affections of an asthenic type, and are not tolerant of antiphlogistic treatment. Diseases characterized by defective nutrition affect them to a great extent. Sterna and Pneumonia Pliconilis reveal here in unwonted severity and in their most intractable forms. They are speedily depressed mentally and are exceedingly apt to become despondent under disease. They are readily acted upon by
vicissitudes of weather and climate. Hysteria and Chorea are common among the females of this class, Hypochondriasis and Melancholia among the males.

In the nervous temperament all the varieties of cerebral and nervous diseases occur in their most marked and typical forms.

In that class of the lymphatic temperament, the individuals of which are characterised by imperfect saprophagisation, both functional and organic blood diseases are frequently seen, such as Anæmia, Splenic and renal diseases, Leukæmia (or Leukocytæmia) leucocyteoses, Intermittent and Remittent fevers, Purpura Haemorrhagica, Leucocyæmia. Inflammations are almost always asthenic.

In the other class, in which there is no deficiency of the red corpuscles, and which has been mentioned above as constituting the variety described by some authors as the phlegmatic temperament, there is a great tendency to the deposit of fat. This deposition is not simply confined to the subcutaneous areolar
tissue (Polipareia), but is found everywhere throughout the body. The muscles, voluntary and involuntary, are seen after death to be degenerated and streaked with fat, the glandular secreting organs being similarly diseased.

The mixed temperaments naturally present the above-mentioned morbid states more or less intimately connected and mutually dependent, but the bearing in mind of such general principles, will doubtless afford valuable indications in the treatment of them whether medical or hygienic and teach the medical man what good effects he may expect from the exhibition of remedies.

The only apology that can be offered for the meagre way in which the temperaments have been disposed of is that had they been more fully discussed they would have required a separate thesis to do them justice.
Part Second.

Inspection of the body in Thoracic Diseases.

1st. Acute affections of the Pulmonary Organs.

Pneumonia affords very few visible signs for its diagnosis. It will be necessary to consider the general appearance of the patient, the mode in which he breathes and the character of the expectoration. The latter is certainly the most important and pathognomonic.

In most instances there is no want of evidence that the patient is suffering from a considerable amount of fever. The face presents an intense dingy flush, the observation of which is of some moment. If the depuration be very urgent, there is lividity of the lips. The skin is dry and the tongue furred. Some writers lay stress on the decubities in pneumonia, and contend that the patient lies on the affected side. This rule could not apply to cases of double pneumonia. Others again say that it is dorsal or else intermediate between the back and affected side. The latter is probably the more correct, but the decubities
appears to be regulated, in a great measure, by the urgency of the dyspnoea; for according as this is more or less severe is the reclining or raised posture assumed. So far the diagnostic signs are of little value.

The breathing in pneumonia differs considerably both from that in bronchitis and in pleurisy. Difficulty of breathing is frequently not complained of, and in some instances it is even denied that there is any dyspnoea. But it is manifest to the observer, from the accelerated motion of the nostrils and imperfect expansion of the thorax, that such must be the case.

Dr. William Gairdner says "The dyspnoea of pure pneumonia is a mere acceleration of the respiration without any of the heaving and straining inspiration observed in bronchitis or in cases where the two diseases are combined."

The number of respirations is increased from 18 or 20, the normal amount, to 30, 40, 50 or even 60 per minute. As a general rule the greater the dyspnoea the larger the amount
of lung consolidated.

Some say that it is more distressing when pneumonia is confined to the apex of the lung.

With reference to the same subject, Dr. Wood observes that "violent dyspncea with short and quick respiration and a purple or livid colour of the face is indicative of extreme danger."

In the limited number of cases of pneumonia seen by myself, in which the disease was confined to the apex of the lung, violent delirium was a prominent symptom. This complication, we are assured, although not usually mentioned in our standard works, is a constant accompaniment of this form of pneumonia.

In the early stages, the cough is dry, or if attended with expectoration, the spits are scanty and watery in appearance.

In two or three days it becomes more copious being viscid and semi-transparent, becoming very soon stained more or less deeply of a red, rusty or orange colour, according to the amount of blood present.
With the advance of the disease, these properties of the sputa become more striking. Their tenacity is so great that the vessel in which they are contained may sometimes be turned bottom upwards and they still adhere to it. When very copious the sputa run together and resemble a tremulous jelly. If poured from one vessel to another the whole flows en masse.

The viscosity of the expectoration may be taken as an index of danger. The more viscid it is, the greater liability will there be of the bronchi becoming clogged and causing suffocation (apnea).

Purulent or prune juice expectoration is characteristic of the third stage. Such are the principal visible phenomena in pneumonia of which the expectoration is the most diagnostic.

The urine presents the usual febrile character. The bowels are confined.

The occurrence of herpes labialis in the early stages of the disease is a bad omen, but at a later period it is said to indicate
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a safe termination.
A crisis may take place with copious perspiration or by a dense deposit of lithrates in the urine; the latter being of most frequent occurrence.

**Bronchitis.** In this disease as well as in pneumonia there is a considerable amount of febrile disturbance.

The first, or what is sometimes called, the dry stage, is frequently associated with extreme dyspnea. There is marked turgidity of the face. The patient sits up in bed from inability to lie down from a dread of suffocation. All the accessory muscles of respiration are called into energetic action; the nostrils dilated and the shoulders elevated. There is great dread of suffocation. The face wears an anxious look. There is great inability to speak much, and the few words that are spoken are jerked out between the gasps for breath.

The disease does not usually linger at this stage, but soon a glairy mucus is expectorated being transparent, adhesive, and
sometimes capable of being drawn out like melted glass. The degree of viscosity has been deemed indicative of the amount of existing inflammation. According as the sputa are expectorated easily or with difficulty is the quantity of froth on it dependant. The greater the difficulty of expectoration, the greater is the severity of the cough and the greater the turgidity of the superficial blood vessels of the face. The sputa are occasionally streaked with blood.

The cough in bronchitis is very characteristic and when once heard will always be recognised.

The ancients were well acquainted with the characters of the expectoration. They said it was still crude when it presented the above appearances, but when the inflammation approaches resolution, the nucleus gradually loses its transparent and frothy aspect and is mixed with masses of an opaque white or greenish yellow colour. In this state they said it was congealed or ripe.

It may happen that the patient sustains
a relapse, in which case the expectoration again becomes transparent, viscid and frothy.
When bronchitis is about to terminate unfavourably, the lips become purple and the face livid. The dyspnoea increases profuse, cold and clammy sweats issue and the patient dies of apnoea.

Pleurisy. In common with the two preceding affections and also with all acute inflammatory diseases occurring within the thorax, there is more or less fever at the outset of acute pleurisy.
The chief points which enable us to diagnose it from either pneumonia or bronchitis are few in number, but they are easily determined.
In mild cases the face does not afford any certain indications of the disease. In the more severe forms, especially those which tend to a fatal termination, the face is said to be pale and anxious.
The patient complains of a sharp stabbing pain, and where the breathing is attentively
watched, there is found to be considerable dyspnoea. Now this difficulty of breathing is peculiar. A deep breath is never taken. The inspirations are quick and short, terminating abruptly, just as if there might be some sudden check to the due expansion of the thorax, and such is indeed the case. The rubbing together of the inflamed surfaces of the pleura, during the expansion of the lung, causes such sudden and intense pain that the patient is involuntarily compelled to check any further attempt at inspiration. He is said to have a catch in his breathing. In such cases the abdominal muscles are called more extensively into action, and sometimes together with the diaphragm, they alone carry on the respiratory movements.

This abdominal respiration, as it is called, is peculiar to this disease. Hence when it does occur it affords a valuable indication of pleurisy. A parallel condition to this is seen when the serous membrane of the abdomen is inflamed, in which case the abdominal
muscles are kept immovably fixed and the intercostals carry on the respiration.

If effusion has taken place, inspection reveals further evidence, in proportion to its amount.

In some cases, the eye at once detects that the side affected is larger and more distended than it should be.

The intercostal spaces instead of being depressed are bulging, and if the fluid has been suddenly poured out, dyspnœa is greatly increased.

With this increase of size is observed a corresponding decrease of expansion during respiration.

In other cases it may be necessary to measure half the chest and then compare it with the other side.

We have already seen that both the preceding diseases pneumonia and bronchitis are characterized by cough and by the expectoration of fluids peculiar to themselves. Now uncomplicated pleurisy is attended, frequently by cough. It is not paroxysmal in its nature, but is small, half suppressed, ineffectual, and in the majority of instances unaccom-
pain is by expectoration. When spuata are coughed up, they usually form a thin glairy fluid.

Lastly, the decubitus is to be considered. Here again a great variety of opinions exist. The explanation of this diversity is merely that authors have described the position of the patient, as it is seen at different periods or stages of the disease.

When that stage is reached, where the patient complains of a sharp pain, he is unable to lie on the affected side. The pain having ceased, and effusion taken place, the decubitus is just reversed. If dyspnea be a prominent symptom, more or less of the upright position is assumed. The explanation of these changes is obvious.

Dr. Paton, in speaking of the value of the general symptoms of pleurisy, remarks, "There is not one which, taken alone, can be said to be strictly pathognomonic, or which indicates in a positive or certain manner the existence of pleurisy, or of pleuritic effusion. Yet when all, or several of them occur..."
Hawes on the principles & practice of Physic.
Vol II page 116.
together, they afford a degree of probability
on these points almost equivalent to certainty.

2nd Chronic affections of the Pulmonary Organs.

*Phthisis Pulmonalis.* Inspection of the body
in this disease enables one readily to form a
diagnosis. In many instances, indeed, the
expression of the face but too plainly reveals
the fatal disease. The experienced eye daily
recognises in the streets too many persons
afflicted with this dire malady.

Tubercular phthisis occurs most frequently
ly in persons of the strumous diathesis,
and they usually bear, on their persons,
unmistakable marks of bygone tuberculous
disease.

Frightful as the mortality from scrofula
is among children, the survivors seem only
to have escaped the infantile form of tubercular
disease, to succumb to the adult form or the
deposition of tubercles in the lungs.

It may not be amiss to consider briefly a few
of the leading signs of the strumous diathesis.
These have been long recognised, and all our systematic writers agree pretty closely in their descriptions of them.

The strumous diathesis is essentially characterized by defective nutrition of the body which results in its feeble development and unhealthy appearance generally.

The circulatory system is below par and the respiration is hurried. The cheeks are delicately tinted and the hair thin and silky. The nails are incurvate, the fingers often clubbed. The teeth are very irregular, projecting, deficient in enamel, here and there presenting small milk white spots indicative of carious ulceration. The cranial bones are subject to deformity, the forehead being hollow and the temples projecting. The nasal bones are also hollowed out, the ala nasi thickened as well as the upper lip and the pupil of the eye dilated which gives a soft expression to the features.

The thorax is narrow and long (no depth of chest), the ribs not infrequently convex and receding from the scapulae. The belly is
tumid and the joints often enlarged. The functions of the body are commonly imperfectly performed. The appetite being capricious, digestion bad, the bowels irregular and the mucous surfaces relaxed. As children they are often precocious but there is no good cerebral development. The mental powers are feeble and the temper uneven. The most intractable forms of zereola are seen in persons of the bilious temperament, and it is not by any means confined to persons of light hair, blue eyes and florid complexion as is the popular belief.

Such being a few of the most characteristic marks of the strumous constitution, we usually expect to find them more or less pronounced in our phthisical patients and we shall not often be deceived.

Some writers divide phthisis into stages, according to the development of certain symptoms, but this place does not facilitate the diagnosis by inspection. It commences in a variety of ways. In some instances after an acute attack of
Dr. Laycock's lectures Session 1861-62.
Mr. Lyne Principles of Surgery, page 75.
pneumonia, bronchitis or pleurisy, in others the disease first manifests itself by a short hacking cough unattended by expectoration. The occurrence of hemoptysis is a very frequent forerunner and accompaniment of phthisis.

In addition to the above mentioned signs of the strumous diathesis, the patient not infrequently exhibits on his person, in the cicatrices resulting from ulceration and supuration of the superficial glands, evidences that he has also laboured under scrofulous disease.

The body is always more or less emaciated, and this emaciation, we learn on inquiry, has been the first circumstance to attract the attention: also that it has slowly and progressively increased, associated with a corresponding degree of weakness and incapacity for exertion, the least exercise being followed by unusual fatigue and languor.

The face is wan and pale with the exception of an intense burning hectic flush over the malar bones, especially in the advanced stages...
of the disease.

The thorax may or may not be contracted and there is flattening under the clavicles. This latter sign is often of great value in those cases where there is no defective development of the thoracic parietes, and when one lung only is diseased, the external depression corresponding with the affected part.

When a deep breath is taken, there is seen to be an imperfect expansion of the chest in the same situation, and when both apices are infiltrated with tubercle, very little expansive movement of the upper part of the thorax takes place. The rhythm of respiration is altered, and when the chest is narrowly watched, expiration is found to be prolonged.

Cough attended with expectoration is another symptom of phthisis: but as we have already seen it is also distinctive of other pulmonary diseases.

The expectoration cannot be said to be absolutely pathognomonic of phthisis, but it is certainly very characteristic. The spuva most frequently observed in tubercular disease, consist of
globular, gray, flocculent masses which the French call nummulare, because they assume a circular form like pieces of money when spat into a vessel not containing water. The expectoration is usually purulent in the advanced stages. Dull yellow streaks, or little curd-like fragments involved in the sputa indicate pretty certainly the existence of tubercular matter, and when seen they afford valuable indications.

Dyspnea is certainly not a constant nor frequent accompaniment of phthisis. This is not surprising; the demands for well formed arterial blood are not so great, in persons whose bodies are so emaciated and where the nutrition is so defective, as in healthy individuals, and a less amount of perfect lung structure is sufficient for the wants of the economy. As the disease approaches a fatal issue dyspnea however is observed.

Feverish symptoms commonly make their appearance at night and are omitted in the morning. Profuse perspiration is a troublesome compli-
cution, as it leaves the subject of it invariably weaker. It comes on at night or towards morning and on awakening the night linen is found saturated with moisture.

Diarrhoea is of common occurrence and it is supposed to be due to tubercular ulceration of the intestinal glands.

Hemoptysis is liable to come on during any period of the disease, lastly hectic supervenes or is more or less marked all along.

These then are the evidences to be obtained by inspection of the patient or by inquiry; and as they are mostly all present, we can seldom err in our diagnosis.

When an individual presents himself, being evidently emaciated, and bearing marks of a serpulous nature, with flattened under the clavicles and imperfect expansion of the thorax in those situations. When moreover he coughs and expectorates hummular sputa, has hectic fever and says that he has experienced one or more attacks of hemoptysis, there can scarcely exist any doubt of the nature of the disease. Inspection is alone
sufficient. Neither Auscultation nor Percussion could teach much in addition. The flattening under the clavicles points out the seat of the disease and little further is required.

**Chronic Bronchitis.** Of this there are various forms.

1st. It is not unfrequently met with in persons in advancing years, who are subject in each returning winter, to a bronchitic cough attended with more or less expectoration, each seizure increasing in severity.

2nd. Chronic bronchitis occurs as a sequel to the acute attack.

3rd. There is another form described by various authors under different appellations viz. Pituitous Cataract, Bronchorrhoea &c. The latter term, expressing as it does, the profuse nature of the discharge, seems to be the best if indeed any such distinctions are required.

4th. This variety, depending on a chronic inflammatory condition of the bronchial mucous membrane, is characterized by the expectoration of peculiar membranous casts of the
bronchi, to which the name of bronchial polyp is applied.

The lastly chronic bronchitis may be attended with another disease, emphysema of the lungs.

Very little requires to be said of that form which affects middle aged and old people. The very circumstance of its existing in the cold seasons of the year nearly suffices for its recognition.

There is usually slight cough and dyspnæa and a moderate amount of expectoration. In the majority of such cases, which have fallen under my own observation, and they are certainly common enough at this period of the year, the patients of the arthritic diathesis.

When the disease is a sequel to the acute form, or when it arises from increased severity of the former variety. the symptoms sometimes exhibit a formidable character. The cough becomes unusually severe, the expectoration consisting of copious purulent matted mucus and some froth.

The dyspnæa is greatly increased after the
slightest exertion and amounts often to orthopnea. In very bad cases there is great emaciation with sweats at night, fever, diarrhea, clubbing of the fingers, and many of the symptoms of phthisis, so that the complaint was formerly called catarrhal consumption. And indeed it is extremely difficult to diagnose this variety by inspection alone with any amount of surety. Now and then we are quite at a loss to pronounce a given case to be one of chronic bronchitis or of phthisis. When there happens to be a dilated bronchus near the apex of the lung, the resemblance is perfect, even flattering under the clavicle may exist and we cannot diagnose between the two.

Some may argue from this the absurdity of relying on inspection, and may uphold the never failing physical diagnosis. But singularly enough auscultation and percussion fail equally in such cases with simple inspection. The physical signs depending on a dilated bronchus are precisely those met with in
in phthisis, and even the stethoscope is unable to solve the problem.

The history of the case may in some measure help us out of the difficulty, but not always. It is seldom, comparatively speaking, that such cases are seen, but when they are, the prognosis must of course be very guarded. Many an unfortunate patient has been told that his case is incurable and the reputation of the medical attendant lost by his recovery.

The affection termed bronchorrhoea as its name implies consists of a copious expectoration of slightly viscid, frothy mucus, which is the only indication of its existence as a variety of chronic bronchitis.

The next form where bronchial polypi or casts are expectorated, may be disposed of in an equally summary manner. It is of exceedingly rare occurrence. I only remember hearing of one case in the Infirmary here during the last two years. A very pretty specimen was shown me by a clerk. It was of a white colour and membranous.
aspect, illustrating beautifully the dichotomous division of the bronchial tubes.

Emphysema often exists in combination with chronic bronchitis, but also separately. It is essentially a chronic complaint, unattended with fever, in which also the subject of it does not lose flesh. Many symptoms are afforded sufficient for its recognition by inspection.

The general signs, when the structural change is extreme, are habitual shortness of breath with tolerably frequent paroxysms of intense dyspnea. — Cough which is not by any means a constant phenomenon. — evidences of dilatation of the right side of the heart and edema of the ankles.

The occasional paroxysms of dyspnea of an asthmatic character, caused the disease formerly to be much confounded with asthma. It is no longer so. The face ordinarily presents a dusky aspect with slight lividity of the lips indicating insufficient aerations of the blood. During the dyspnea these conditions are much
exaggerated. The expectation of copious bronchial discharge upon the dyspnea causes almost instantaneous relief and under the head of humoral asthma many authors are in the habit of discussing this affection. Humoral asthma is then emphysema plus chronic bronchitis.

In well-marked cases of emphysema, the inspection of the thorax is of great service. The chest acquires a peculiar barrel-like shape, both the anterior and posterior surfaces of the thorax becoming very much rounded. The ribs are widely separated on account of their assuming a more or less horizontal direction, instead of possessing the natural obliquity. With the separation and horizontal direction of the ribs, there is no bulging of the intercostal spaces.

It is important to notice this circumstance because it exists in extensive effusions into the pleura.

The alteration in shape of the thorax is not invariably seen on both sides. One lung only may have undergone the pathological changes
constituting emphysema, indeed in some instances only a portion of lung is diseased, and the increased capacity of the chest is limited in consequence.

Mr Corfe gives as a diagnostic sign of emphysema of the upper lobes, the appearance of a tumour in the triangular space between the clavicle, supra-mastoid and omo-hyoid muscles, at each spell of hard coughing, a phenomenon resulting from a kind of hernia of the lung in consequence of a want of support in that situation.

When the breathing is watched, the chest will be found to rise and fall little during respiration. The whole chest appears rather to move en masse.

In emphysema we look also for evidences of cardiac complication. In typical cases there is usually dilatation of the right ventricle and we know that to be the fact by noting pulsation in the jugular veins and also in the epigastrum, both of them being synchronous with the heart impulse between the fifth and sixth ribs. The patient is unable to assume the horizontal posture. The obstruction of the circulation leads to oedema of the feet, ankles, and lower extremities.
Chronic Pleurisy is the last pulmonary disease to be considered here. This form of pleurisy is in most instances nothing more than a continuation of the acute disease. There may be either effusion of serum or of pus into the cavity of the pleura, the former being called hydrothorax, the latter empyema.

The quantity of fluid present is usually much greater than in acute pleurisy. It is sometimes enormous, producing great distension of the thorax. When the fluid is not purulent, it is occasionally absorbed and acire effected, but from the lengthened pressure to which the lungs have been subjected, they are prevented from being re-expanded and in consequence, from the pressure of the atmosphere, the thorax on that side becomes greatly contracted. This gives rise to great deformity. The shoulder is drawn down, the scapula is relatively more prominent and nearer the spine, the ribs are lower, lie more obliquely and closer to each other.

We have seen that the previous disease was associated with distension of the thoracic walls.
it comes then to be a question how to diagnose between them.
1st. In emphysema both sides are in the majority of cases affected, in empyema only one.
2nd. In emphysema there is no bulging of the intercostal spaces and the whole thorax moves in mass during inspiration falling little in expiration. In empyema there is great bulging of the intercostal spaces, and the thorax does not move at all in respiration on the affected side.
3rd. In emphysema there is no emaciation; in empyema it is generally considerable.
4th. In emphysema we have usually evidences of cardiac disease, especially dilatation of the right cavities; empyema is not necessarily associated with cardiac disease.
5th. In emphysema the impulse of the heart is seen to strike the thoracic walls near the normal situation; in empyema the heart may be displaced and its apex impinge upon the thorax to the right of the sternum or external to and above the left nipple, or even, in some cases, in the axilla.
In empyema the sputa are mucous and frothy in character, in empyema when a communication exists between the cavity of the pleura and a bronchus, mouthfuls of fluid purulent matter are expectorated. Sometimes the pus escapes externally through a fistulous opening which is therefore a useful guide.

Other distinguishing features exist, but these presenting themselves more or less combined are sufficient for the majority of cases.

It would be scarcely thought possible to mistake empyema for phthisis; but of its possibility there can be no doubt. One case occurs to me which was refused admittance into a hospital where phyto-

ical patients were not admitted, on the grounds of its being such a case.

The physician who pointed out the man to me had at once recognised the nature of the disease both from the general and physical signs

and entertained good hopes of a successful termination which were subsequently fulfilled.

This malformation on one side was considerably expanded and quantities of pus expectorated by the mouth.
Acute inflammation of the Pericardium.  
Pericarditis. This disease resembles acute pleurisy in many of its features, from the similarity of structures implicated. Pericarditis is well known to occur most frequently in persons of the rheumatic diathesis, and is always dreaded as a complication very likely to arise during the course of an ordinary attack of rheumatic fever. Inspection here does not afford the observer any very trustworthy indications, and in fact before auscultation was practised, its existence was quite overlooked in the great majority of instances. This was owing doubtless in some measure to the diversity and irregularity of the symptoms which occur in it, but also to their being common to many of the diseases already discussed. Like all other febrile and inflammatory diseases, pericarditis is ushered in by rigor or.

It is said, that occasionally the onset is marked by faintness or positive syncope, rather than chilliness.

In cases of acute rheumatism, where there is
dyspnoea and when uneasy feelings about the cardiac region are complained of, it would be right to suspect cardiac complication.

Some writers mention the occurrence of wild delirium (delirium ferox) as one of the symptoms of pericarditis, also restlessness, attacks of faintness, amounting not unfrequently to syncope, anxiety of the countenance and oedema of the face.

But as all these symptoms do not generally nor of necessity present themselves in every case, no great importance can be attached to them individually.

The decubitus is less liable to lead to error. The patient cannot lie on the left side, and any position calculated to throw extra weight on the heart is carefully avoided.

Increased fulness in the precordial region may indicate that effusion has occurred.

When cough is present, it is dry and suppressed. As before stated, nervous symptoms are sometimes predominant.
Chronic affections of the Heart.

Before concluding this division of the subject, a few remarks are necessary upon chronic cardiac diseases.

To consider these in detail is manifestly impossible; yet a few general observations on them, must not be omitted.

In the first place, diseases of the heart always involve sooner or later, structural changes in other organs, so that it is often extremely difficult to determine, how much to attribute to the cardiac and what to the other lesions.

We have observed above that they very commonly occur in persons of the sanguine temperament and in the arthritic diathesis.

Evidences of a high state of development generally present themselves. We observe whether the capillaries of the skin are distended with arterial or venous blood, or whether the surface of the skin is blanched from a deficiency of vascular supply.

The fact that organic changes in one side of the heart are very apt to lead to disease...
in the other side, throws much difficulty in the way of their being diagnosed by inspection, since complex diseases are as frequent almost as simple.

The general symptoms of diseased valves, are so closely associated with those of hypertrophy and dilatation, that it is difficult if not impossible to discriminate between them. This is certain, however, that disease of the valves is capable, of itself, and before the production of hypertrophy and dilatation, of giving rise to obvious morbid phenomena, among which are the results of vascular congestion on the one hand and deficiency of blood on the other.

When fulness is noticed over the cardiac region and more movement than natural is seen in the same situation, enlargement or effusion into the pericardium may be justly suspected. The movement of the heart may be seen increased, also a vermicular motion of the heart commencing above and terminating at the apex, so that a wave-like movement takes place with each ventricular systole.
This is said to indicate either adherent pericardium or adhesion of the pleura to the pericardium.

One case where this vermicular movement was conspicuous, is strongly impressed upon my memory. It occurred in the clinical wards here last summer.

The heart was auscultated as usual, and a loud double blowing murmur was audible over the apex, diminishing gradually in intensity as the stethoscope was moved inwards in a line towards the eustachian cartilage.

The second sound at the base was pronounced normal. The diagnosis, I believe, was mitral contraction and incompetence.

After death to the surprise of every one, no valvular disease existed at all, and the only lesion of the heart was adherent pericardium.

Sometimes the carotids in the neck are seen pulsating with unusual vigour, and not the carotids alone, but there is occasionally marked visibility of the pulses all over the body. The arteries are tortuous and roll about beneath the fingers. This is considered indicative
of aortic disease.
In connexion with the visibility of the pulses, an arcus senilis should be associated, indicating as it does fatty or atheromatos degeneration of the arterial coats.
With reference to degeneration of the arterial coats, we should bear in mind the greater tendency to apoplexy.
Different organs are liable to become affected in different cardiac diseases. Thus head symptoms are prominent in simple hypertrophy of the left ventricle. They are such as result from active determinations of blood to the head, rather than venous congestion.
The face is flushed and of a bright red or purplish hue, the features are swollen, the eyes projecting and brilliant (glittering). The cerebral vessels are rendered unusually tense and are liable to give way and cause apoplexy, more especially when the tunics are degenerate.
As a general rule the whole arterial system is maintained in a state of tension, highly
favourable to the occurrence of inflammation and active hemorrhage.

It is asserted also that the kidneys become enlarged, when hypertrophy of the left ventricle exists, and undergo that species of degeneration designated Bright's disease. In hypertrophy of the right ventricle, there is not this direct effect upon the arterial systemic circulation, consequently the characteristic symptoms of the same disease in the left ventricle are wanting.

It was formerly argued theoretically that it would occasion in the lungs similar symptoms as are produced in the head in the former affection, but this is not necessarily the case: for the incomplete closure of the tricuspid valves, permits a certain extent of regurgitation, and the ventricular column of blood is, as it were, divided. This reaction towards the brain, leads to venous congestion and pulsation is seen in the jugular veins. The patient may experience vertigo so and yet the face instead of being flushed and red, may be pale or dusky.
Wood's Practice of Medicine Vol II page 164.
and the lips livid.

The occurrence of dilatation and valvular disease necessarily modifies the symptoms produced by hypertrophy alone.

When the left ventricle is dilated, the arterial blood is distributed with insufficient force and in diminished quantity through the branches of the aorta. Hence arise signs of a want of oxygenated blood in the brain and throughout the body at large. While at the same time, the pulmonary veins become loaded, the congestion progressively extends backwards to the capillaries of the lungs, the pulmonary arteries, the right chambers of the heart which also in turn becoming dilated, lead to congestion of the systemic veins.

When the right ventricle becomes dilated, the brain, liver, stomach, intestines and venous system at large is congested, while the pulmonary circulation and arterial side of the heart are badly supplied.

Such conditions result in a variety of effects. The patient complains of palpitation and a feeling of debility. There is a tendency to faint.
-ness and syncope.

Hence paleness of the surface and coldness of the extremities, dyspnoea often amounting to orthopnoea, pallor or dusky and livid hue of the face, the purple lips, the mental hebdomade, depression and drowsiness of a feeble or congested brain, the nausea, vomiting and dyspeptic symptoms arising from an oppressed stomach, the general tendency to passive hemorrhages from all the mucous surfaces and finally the universal dropsical effusion, commencing in the lower extremities, all of which form so many prominent symptoms of cardiac affections.

In conclusion I may remark, that it was not my intention to confine myself entirely to the subject of the diagnoses of thoracic diseases, but in writing the above, it was soon perceived, that it would be quite impossible to go over even a small portion of the nosology. Consequently it was deemed more advisable to limit the subject to diseases occurring in one anatomic
cal and physiological section of the body, than to choose here and there a disease and consider it in relation to its diagnosis by inspection.

It might be thought from the prominent position which has been given to this method of diagnosis, that it is considered infallible. Far from it.

No one can appreciate more highly than myself the great boon conferred on medical science by the introduction of the stethoscope.

The absurdity of any man pretending to confine himself to any one method of examination is self-evident; for it is impossible.

Every one there who is desirous of becoming a good and useful practitioner must embrace every method of examination in order that he may form a correct diagnosis.

A blind man could never make a good physician, neither could a deaf one; but the deaf man, however, would make a much better one than the blind man.
In medicine then all the special senses, vision, hearing, taste, touch, smell, are necessary, and not only that, but they must all have been properly and carefully educated; and in proportion as we are capable of bringing each and every one of them to bear upon the appreciation or elucidation of the symptoms of disease, just in that proportion shall we be judicious and accomplished physicians.

William George Pop.