Mr. Blyston

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Diseases of the Heart
as illustrated by cases under the care
of Dr. Christieason,
in the
Royal Infirmary
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Diseases of the Heart

However admirable the structure and accurately adjusted the mechanism of the heart, it may be, yet like other organs of the body, it is ever prone liable to disease. Being in a morbid state, is the prolific pathological parent of serious and fatal lesions. Cardiac affections, at one time considered rare, are now known to be of common occurrence. This apparent greater frequency is accounted for principally by improvements in diagnosis, but at the same time it appears, from the long and extensive experience of accurate observers, that functional diseases at least are actually increased in frequency. It is not surprising that the heart should suffer from various forms of disease when we consider its complexity of structure, & activity of function. Lessons of this organ are divisible into
Functional & organic — some of these, as illustrated by cases in the Infirmary, will form the subject of this thesis.

And first of functional disease, which may be either latent or manifest — the latent form gives rise to no symptoms which attract the attention of the patient, it is only discovered by the medical attendant when examining for other diseases. It is then for the first time, without having been suspected, its existence that an endocardial murmur is observed. Now arises the important question; is it of functional or organic origin? To determine this point many circumstances have to be taken into account, such as the character of the murmur, its relation to the healthy sounds of the heart, the position where it is heard, loudness & the constitution of the individual.

A functional endocardial murmur is single, & smooth, affecting the first sound of the heart, but never the second; it is synchronous with, or more generally follows the first sound; it never precedes it. Neither does the murmur entirely fill up the pause between the two sounds of the heart, it is often audible over a great extent of the chest, but always loudest at the base. In many instances
can be heard in this position alone. This bruit is frequently loudest when the pulse is slow, so that it does not seem to be influenced by the capcity of the heart's action. The effect of daily exercise is very remarkable in diminishing this sound; as the general health improved, becomes gradually after until it finally disappear. This murmur is further distinguished, from one of organic origin, by the absence of secondary affections so commonly resulting from lesions of the heart's structure. There is especially no edema of any part of the body, unless perchance in cases where the debility is great; then there may be slight puffiness of the ankles, but this arises from general weakness. It has no direct reference to the heart disease; neither is the diversity greater than can be accounted for by the imperfect state of the constitution. From the previous history of the individual much valuable information may be obtained, which, tho' negative in character, assists greatly in forming a correct diagnosis. If it is found on inquiry that there has never been any febrile affection, nor injury of the chest, and that the individual has never suffered from acute rheumatism, then there is pretty strong presumption
evidence in favour of the disease being purely functional. There is also the absence of the signs of organic lesion as indicated by the state of the pulse, the character, & position of the heart's impulse. It is further to be observed that an endocardial murmur, having the features previously mentioned, is a very common and not necessary result of an anxious state of the body. It is also frequently met with in females of a nervous temperament. A functional endocardial murmur, though generally occurring in persons more or less debilitated, may also be detected in those apparently enjoying great vigour of constitution, engaged in active occupations. Such cases, according to the observations of Dr. Christian, are of frequent occurrence when claiming for insurance. In some instances the murmur is merely temporary, arising from the excited state of the individual, but in others, it has been found to indicate the commencement of organic disease; hence the great difficulty, if not impossibility, in many cases, of arriving at an accurate diagnosis & the great caution necessary on the part of the physician in giving his opinion too definitely as to the precise affection.
Functional disease of the heart may assume a manifest character, then it is that the individual is painfully sensible of this malady. There are paroxysms of violent palpitation with a feeling of faintness, & actual syncope may soon occur. The apprehension, mental uneasiness are often greater than in those labouring under the more formidable, but less remediable form of disease—the organic. The pulsations in the chest are very distressing especially when the attention is directed to it. Unfortunately for those who are the subjects of this disease, they brood over their ill, & thus unconsciously increasing their sufferings become active in aggravating their symptoms. Slight causes, which agitate the body or mind, produce violent & forcible palpitations in consequence of the irritability of the heart. There is generally an enervated & enfeebled state of the system, & also frequent fits of dyspnoea, associated with this disease. The pulsations in the temporal, & carotid arteries, chiefly at night, is a source of great annoyance; & thus the distressing palpitations in the chest by day is taken up by the throbbing arteries.
at night so that when the unhappy sufferer lays his head on the pillow, instead of having his apprehensions drowned in slumber he is haunted by this new symptom, which renders his nights as sleepless as his days are miserable.

The diagnosis of this disease is of great importance both as regard to the patient's comfort and the line of treatment to be followed. The true character of the impulse is judged of by the absence of the physical and general signs of hypertrophy; the very violence and excessive irregularity of pulsations especially if followed by long periods of calm action, point to its nature as being functional; likewise is the emaciation nor the debility disproportionate to the amount and duration of the patient's sufferings. The long continuance of the affection without the appearance of symptoms known to arise from organic lesions, its tendency to mazaema or bronchitis, the supervision of the latter not aggravating the symptoms, the condition of the patient improving by daily exercise and good diet, the absence of the physical signs of organic disease & the Endocardial murmurs when present having the characters previously
mentioned, are circumstances all important in indicating the affection to be merely functional. Here too, as in the latent form of the disease, the constitutional state of the patient assists materially in forming the diagnosis. Several diseases give rise to functional affections of the heart, not directly but by inducing a morbid constitutional state favourable to their development. Cardiac disease of a functional kind has been observed in those labouring under acute rheumatism, Bright's Disease but an endocardial murmur when associated with either of these affections is very suspicious, it always to be dreaded. In other instances the heart disease occurs as sympathetic of uterine lesion, or menstrual disturbance. When arising from these causes the symptoms are usually very diverse. It is also of frequent occurrence in persons debilitated by loss of blood from hemorrhoids or by other capillary hemorrhages. There is an affection termed charity disease of the intestine & by Dr. Christian more appropriately
designated "fibrous diarrhea," in which there is a great tendency to functional disease of the heart, principally among females. Exhaustion and excitement from prolonged mental anxiety. Alcohol as well as excessive tobacco smoking, are observed to be common causes of cardiac derangement. It may also result from the use of particular articles of diet, especially green tea & coffee. Substances of this kind are mentioned by several writers on the subject. In short, there are two states of the constitution particularly favorable to the development of functional disease of the heart; these states are nervous irritability & anemia in whatever way induced. Young persons, chiefly females who are in the habit of reading a great number of novels & romances become very susceptible. The mind is so imbued by the fanciful, & wrapped up in the general excitement of the scenes described, that the slightest causes will often arouse the heart to unsteady activity. And when the practice is persisted in
There may be such a degree of constant irritability induced as to give rise to symptoms equally disturbing and disagreeable. But nervous irritability may be the result of disease, it is then followed by the like signs of functional disorder of the heart. It would be foreign to the subject of this thesis to trace the various modes in which nervous irritability is produced; suffice it to say that it is a very common cause of palpitations of the heart among young females. Medical students & medical practitioners to have suffered not infrequently from the same cause. A change in the relative proportions of the constituents of the blood, constituting anaemia, is also observed to be usually followed by more or less cardiac derangement. It perhaps this would be an invariable consequence were the disproportion of the blood's constituents sufficiently great. Anaemia whether produced artificially or as the result of disease is alike prolific of such affections. Thus it is found that frequent & copious blood-letting is followed by severe palpitations, an endocardial murmurs, profuse & protracted, menstruation has the same effect.
Especially where associated with a nervous temperament as it often is. Chlorotic anemia and anemia caused by fibrous diarrhea are equally productive of functional rearrangement of the cardiac organs. The impoverished state of the blood is differently produced in these various conditions. In blood-letting, menorrhagia & bleeding from hemorrhoids, the disproportion of the elements of the blood is the result of the direct loss of this fluid, while in chlorosis & fibrous diarrhea there is not the direct loss of blood but, what amounts to the same thing, new blood is not elaborated. The system continues to make its demands on the nutritive fluid, but the assimilative powers are at fault & unable to supply material commensurate with the demand. The anemic state whether caused by direct loss of blood or by imperfect assimilation of nutrient, consists in a deficiency of the red corpuscles & fibers of the watery parts of the circulating fluids. But no matter from what cause or by what process this impoverishment is brought about if it be great enough the result is one of the same -
immittatible symptoms of functional disease of the heart. And it may also be remarked that a minor degree of anemia consistent with hypochondriasis or hysteria will as often if perhaps more certainly lead to the same consequences. It is to be remembered at the same time that symptoms of a cardiac affection do not necessarily in every case result from nervous instability or anemia yet the concurrence of these is sufficiently frequent to claim attention in formulating a correct diagnosis. There is a condition perfectly consistent with health whose signs of a functional affection may be observed. This is one with individuals who have congenitally an unusually small heart, which, as if to compensate for its diminutive size, acts with such frequency and force as to produce severe and distressing palpitations.

The heart is liable to another class of diseases—the organic. These are of a very formidable character whether considered in reference to the numerous serious secondary affections to which they give rise or as regards their treatment. Among the most important of the organic
affections of the heart is hypertrophy with or without valvular disease. Hypertrophy is usually perhaps always attended by enlargement, which may be general or partial, most frequently the latter, affecting one or more chambers of the heart or some the septa. The parts generally affected are the ventricles, of these the left (if far the most common seat of damage). The greater frequency of hypertrophy of the left ventricle was supposed by some to depend on the more determinate quality of the arterial fluid. but this view is quite untenable. The walls of this cavity are normally thicker than those of any other compartment of the heart. This fact, taken in connection with the larger amount of work the left ventricle had to perform, the greater liability to be interfered with in the discharge of its functions, make it at once obvious why the walls of this chamber should be so commonly the seat of hypertrophy. Different divisions of hypertrophy of the heart have been proposed. The classification of Beirne is the one now generally adopted. This division is based on the
circumstance of the capacity of the chamber being modified or unaffected by the increased thickness of its walls. According to Bertini's arrangement, there are three varieties, eccentric, simple, and concentric. By eccentric is meant hypertrophy of the walls with dilatation of the cavity; this is the commonest form. When the capacity of the chamber remains unaltered but the walls are thickened, it is termed simple hypertrophy, which is of rare occurrence. Again, when hypertrophy of the walls takes place at the expense of the cavity, it is called eccentric. This last variety unless as a congenital malformation is totally denied by some. Cruveilhier seems to have been the first to entertain this opinion and by him it was followed by this form of hypertrophy was considered to have no real existence during life but as a transient appearance arising at the period of dissolution, a result of the mode of dying. Cruveilhier observed the presence of a concentric hypertrophy in the hearts of those who were Vaccinated. The same observation was made by Dr. Buds in persons who died suddenly from cholera.
But these appearances are explained by the view as samples of concentric hypertrophy but as a temporary condition of a heart which being more or less hypertrophied death had occurred in all the energy of contraction. While this explanation seems to be correct so far as it goes yet it will not account for all cases. In doubt circumstances may arise during life which would lead to contractions of one or more cavities of the heart. In defence of this position it may be stated that concentrically hypertrophied hearts have been observed in those who met with no sudden nor unexpected death, but where disease, by slow and steady pace approaching the heart, was communicated in his dissipation, when it might be said both body and mind were awaiting the result. In these cases the heart most likely was not deprived from the influence of general debility so could not be taken by surprise in the energy of contraction. Instances of this form of hypertrophy are generally found with in hearts which congenitally small, have after
What disease has hyperkalemia along with
A. without calcaneal destruction.
Hypertrophy occurs with or without valvular disease. In either case, it may remain latent for many years but generally manifests itself by symptoms of an alarming and dangerous kind. The patient usually suffers from palpitation, chiefly when lying on the left side. There is a kind of palpitating sensation in the head, and the temples this may even be observed. The palpitation occurs in fits and is frequently followed by fainting. There are paroxysms of dyspnea, which, as well as the palpitation, is greatly aggravated by exertion or a violent effort. But these symptoms on the other hand may be severe as entirely to preclude any such exertion. Mental excitement has a similar influence in increasing the severity of these symptoms. Usually there is great anxiety of mind, which is not so well marked as in functional disease. The pulse is powerful and leaving but when the aortic orifice is constricted this is not observed.
to be the case. In the early stage of the disease before the patient is reduced the condition is generally florid. Pain in the chest in the epigastric region is often complained of and also a short hacking cough which may occur in paroxysms after any over-exertion. An obscure pain in the chest is often a source of annoyance to the patient. Hemoptysis may occur likewise anaemia but this latter symptom is more properly considered a secondary affection which makes its appearance in the advanced stage of the disease. These are some of the general signs, but often they are absent for it is well known that dyspnoea soon with varicose disease, may exist to a considerable extent without causing much weakness, although the individual be engaged in an active occupation. Percussion is often of value in determining the physical condition of the heart, but Euphony, which is a common accompaniment of heart disease, greatly interferes with this mode of diagnosis. With such a complication
The extent of dulness appears less than normal. The fallacy from this source, may in some measure be avoided by percussing with considerable force so as to elicit a sound from the overlapped organ, or also by remembering that an emphysematous state of the lungs is usually associated with organic disease of the heart. Percussion then and interfixed with by this other circumstance, shows an abnormal extent of dulness in the cardiac region. There are however so many conditions influencing percussion that it is of much less value as a means of diagnosis than in affection of the lungs. The apex of the heart generally lies lower than in health it be seen in the fourth intercostal space. The displacement of the apex is not a constant occurrence, but when present, I combined with other symptoms, is a sign of considerable importance. The impulse of an hypertrophied heart is very characteristic. Then the hand is placed over the apex. The impulse is felt to be strong & leaving. May sometimes be made visible by placing the stethoscope on the back.
where the aperistoles. Where the heart is healthy the impulse is so well defined to
precise that a person imagined he can lay
his finger on the very spot where the aper-
istsales but when hypertrophied there is the
absence of that limited punctuated impulse
there is observed a diffuse impulse or rather
leaving which may be felt over a considerable
extent of the pericardium. There is frequently
a wavy sensation imparted by the impulse,
which may also be irregular and tumultuous.
Neither is it synchronous with the pulse.
Especially when the aortal valves are
diseased. When valvular disease exists the
stethoscope affords great service in the diag-
nosis. According to the extent & nature of the
valvular lesion so will be the sounds emitted.
The normal sounds of the heart may be greatly
muffled & distant, but more generally they are
louder & altered in character being accompan-
ed by a new sounds. An endocardial murmur
may still exist with one or both sounds of the
heart & the murmur may assume all varieties
of sound from a pure, musical, clear tone to
a harsh built. Hence the numerous terms employed by various others to express the precise character of the different kinds of endocardial murmur. By means of comparisons or otherwise such nice distinctions cannot be explained so as to convey from one mind to another any very accurate idea, neither is it of much importance what the nature of the murmurs may be, only so far as to distinguish it from one depending on functional arrangement. Often indeed it is impossible to say whether an endocardial murmur is functional or organic unless by fearing other symptoms we mind to come with all this precaution an error may in some cases be committed. Generally however the murmur and the accompanying phenomena are sufficiently diagnostic of the lesion which originated them. In some cases this abnormal sound may be heard by the patient in these instances may even be appreciated by the physician without applying his ear to the chest. In examining the pericardial region by means of the stethoscope the abnormal sound is heard with various degrees of intensity in
different positions. It may be at the base or the apex, along the margin of the sternum or even beyond the cardiac region in the course of the large vessels. From the murmuring with one or other sound of the heart it is not competent to say whether the aortic or pulmonic valves are affected. The situation where the murmur is heard loudest, combined with the regularity or irregularity of the heart's action, the relation of the murmur to the radial pulse, are circumstances all of which require to be considered in coming to a conclusion as to the probability of which set of valves is involved. The difficulty of arriving at an exact diagnosis on this point must be obvious. When it is remembered that a great many changes, if phenomena are contemporaneous with each sound of the heart. Thus a murmur with the first sound may be caused by mitral incompetence, or disease of the aortic orifice of valves; a murmur with the second by mitral obstruction, or aortic insufficiency. Other causes might be mentioned as affecting the different sounds. The close proximity of the aortic and mitral orifices add not a little to
The risk of error is again increased by occurring with vascular disease may, by causing displacement of the organ, increase still more the uncertainty. Notwithstanding these several sources of error a fairly correct notion may be formed as to what values are at fault. A murmur heard louder at the apex, with irregular action of the heart, a want of synchronism between the impulse and radial pulse, are signs which point to arterial disease. On the other hand the lesion is considered to be arterial when there is a murmur with the second sound, louder at the base, propagated along the course of the large vessels. If there is constriction of the aortic orifice the pulse is much less powerful. Precision of diagnosis is very desirable when it influences the treatment—but where, as in the discordant instance, ascertainment is both difficult and unimportant it becomes rather a curious pathological problem which in many cases can only be solved by necropsy and cadavers. There are several causes which may give rise to a murmur like that depending on vascular disease. Tatham mentions a case where it
Seemed to result from the mere force of the heart's contraction, was only functional. When the chest is deformed, the heart with the other viscera greatly displaced; there may be a sound produced resembling very much one arising from valvular lesions. Even fracture made by the chest itself when the patient was young give rise to a similar phenomenon. These, & other causes often lead to great embarrassment on the part of the physician, who in order to arrive at a correct diagnosis, must take a variety of circumstances into account, & being aware of the different sources of error, endeavour to avoid them.

The secondary affections consequent on hypertrophy & valvular disease of the heart are numerous & formidable. Hypertrophy of the left ventricle gives a strong tendency to cerebral apoplexy, though in many instances the hypertrophy & apoplexy may with more justice be looked upon as consequences of the same cause. Auricular is a common sequel of hypertrophy with valvular disease. Atelectasis may spring up as part of the general distension, & in such cases the
Most remarkable in mechanics of motion.
Liver is sure to be affected. In short, congestion, effusions, hemorrhages & inflammations in different organs & tissues of the body, & even sudden death may occur as secondary affections of organic disease of the heart.

Hypertrophy of the heart is perhaps always a consequence of previous disease & the cause, in some instances, may not be discovered during life. Increased development of the muscular structure of the organ is in all cases a truly conservative effort of nature to counteract bad effects which would otherwise accrue to the system. But unfortunately this remedy is likely to be followed by equally disastrous if not worse consequences than those which it was intended to prevent. Heart disease is known to be a very frequent occurrence as a result of various lesions especially those which arise in connection with acute pneumonias. These inflammatory attacks either the external or internal lining membrane, there are constitutional produced favorable for the development of hypertrophy, or of valvar disease & consequent hypertrophy. Pericarditis is usually followed by more or less adhesion of the pericardium & a cause of hypertrophy is established.
At first sight this would appear to be a very efficient cause, but on examination it is found that adhesions may prevail to a great extent without producing hypertrophy. Enlargement of the organ therefore is not an invariable consequence. Nor is it commensurate with the amount of adhesion when it does happen. The constant activity of the heart—may in some measure prevent adhesion, and when formed the pericardium may so accommodate itself as not to demand such an amount of increased action which would inevitably end in hypertrophy. When hypertrophy arises from adhesion of the pericardium it is usually general. There is another and more common cause—side stitches which leave behind it a state which is interfering with the valvular mechanism of the heart that hypertrophy becomes all but an invariable result of this lesion. Inflammation of the internal lining membrane of the heart directs the chief part of its violence against the valves & surfaces which become altered in various ways by permitting degeneration or presenting an obstacle to the onward current of blood, act as very effectual causes of hypertrophy.
The orifices of the heart are often contracted. The valvules are subjected to diversified & triangular alterations. They are very generally thickened at their edges or may be fringed & merely toughened. Adhesions may bind them to the sides of the chamber or to each other, forming an annular opening & rendering their sufficiency impossible. In other instances the whole valve is thickened & stiff, which state is equally unfavourable to fulfilment of function. The valvules are also sometimes found to have numerous perforations. The aorta truncatus may be shortened or even trapped across. Stenosis of the mitral or aortic orifices may also take places. All these different conditions lead more or less to hyper trophy. Whether there is contraction of an orifice of incompetence of its valvules the result is the same & when both lesions coexist the cause is doubly potent. The several conditions demand increased action of the heart to propel its contents as in the case of other muscles increase of function is followed by increased development of its proper texture. The state of the vessels after endocarditis has subsided may also have some effect in promoting hypertrophy. As in other
Inflammations the vessels leading to the inflamed part are dilated & convey more blood than usual. This state continues some time. Now this being the case with the heart, from obstructive disease being called upon to act more frequently & powerfully, keeps purifying blood into these vessels at the same time when the heart from having its functions increased, requires more aliment which is readily supplied by the now unusually active organ, & is readily conveyed by the dilated vessels. While valvular disease is no doubt the great & principal cause of hypertrophy yet I think that the permanent state of the vessels may in some measure aid & act as a concurrent cause of the same result. Another cause of hypertrophy is injury of the heart by a shock or any violent emotion. Thus two men running in opposite directions & coming suddenly into collision one of them may fall & be attacked by severe palpitation, dyspnea, & a feeling of imminent death. The heart had been found to become enlarged afterward. Over-exertion in running or rowing has been
followed by a like result. In these instances from the very violent and sudden effort demanded of the heart—a picture of some of its values may be created—& inflammation setting up such alterations may be produced, as well render the valves unfit to discharge their functions, & thus hypertrophy may be induced just as from the operations of the other causes mentioned previously. Fothergill cites a case where a fit of anger gave rise to severe palpitations, dyspnea, dyspepsia & other symptoms of heart disease, in short the heart became hypertrophied. On examination after death no apparent injury to account for the enlargement could be discovered. Some temporary condition may have existed sufficiently long to lay the foundations of the disease & that would be enough for hypertrophy when commenced in some degree the result of itself. Patients often refer their disease to some violent emotion but it is likely that in many instances this was only the cause which favoured the development of a latent affection. At the same time it must be acknowledged that
such circumstances as require a sudden over-
action of the heart may produce an injury
that will end in hypertrophy. There are times
caused beyond the heart which may cause obstruction
of the current of blood propelled by the left ventricle,
and produce enlargement. Narrowing of the aorta
near its origin acts in this way, and also dilatation
which implies a twofold condition favorable to a
like result. These dilatations of the aorta of its base
is a want of its natural elasticity to bend forward
the blood, and this in most states there is generally
present—an insufficiency of the aortic valves. It has
been maintained by some that obstacles to the
circulation even at a great distance from the
heart may cause hypertrophy; dilatation of its
left ventricle. But that such cannot be the case
is apparent from the fact that the channels by
which the blood can make its escape are so
numerous as to preclude the possibility of such an
amount of backward pressure that would be
sufficient to cause hypertrophy. Pathological
observations also abundantly prove the same thing.
The pulmonary consumption, where all the tissues
of the body are wasted, it is remarkable that
the heart, in many cases, does not suffer from the
general atrophy; but is somewhat enlarged. Perhaps
this may be accounted for by the frequency of its
action in the advanced stage of that disease. The
blood is impoverished; & the heart, as in other cases
acting on conservative principles, tries to make
up for the inferior quality of the blood by passing
the current quickly round, & thus to maintain for a
little longer the flickering flame of life. But the
blood is also diminished in quantity; & the heart
being a hollow-muscle require to make a more
determined grasp at its contents in order to
drive them forward. In this way by its greater
frequency of action hypertrophy of the heart may
be caused & accounted for. A hypertrophic condition
of the heart is often observed in healthy persons who
follow laborious occupations, & in whom the muscu-
lar structures of the body generally are largely
developed. In such persons the heart is kept
in a state of active ejection, & perhaps the com-
pression exercised by the muscles of the body
on the blood-vessels may, by requiring increased
propulsive effort, assist in producing enlarge-
ment of the organ. Increased activity of the heart
from whatever cause, seems adequate to produce hypertrophy so that mental excitement might lead to this result. But it is questionable if such a cause is ever sufficiently restricted or continuous in its operations to give rise to enlargement of the heart. Many other conditions as malformation of the chest, thoracic tumours it might be mentioned, as leading to hypertrophy. But it may be stated generally that whatever causes increase, tends to cause increase of nutrition. When such a condition remains for a sufficient length of time, hypertrophy of the heart is a necessary and invariable result.

As there are two kinds of heart disease—functional and organic—so there are two kinds of treatment corresponding to these—active and palliative. When functional disease of the heart exists in the latent form, the individual is not to be made acquainted with the nature of his malady. The treatment employed is not directly addressed to the heart, but to the constitutional state, which gives origin to the cardiac affection. A nutritious diet is recommended, exercise in the open air, preparations of iron, other
remedies suitable for removing the cause of the
arrangement, are all found serviceable in
getting rid of the cardiac rumensum by which
the affection manifests itself.

If the functional disease assume
the manifest form, then the great cardinal first,
is to remove the patient's attention from the
heart, & to persuade him that his disease is
merely functional, & not of serious import. The
cause is to be sought for & removed. Particular
attention to the digestive system is necessary.
Flatulence is a common & disagreeable symptom
requiring attention, also the general state of the
foul breath demands especial care. If there is any
uterine disorder at the root of the evil it must
be removed. The habits of the patient require to
be completely altered, principally those of
an injurious tendency, moderate specious,
daily country air, & cheerful society. In fact
the treatment is to be directed to every function
of the body, especially to that which is all fault.
The mind is to be kept easy, & free from anxiety
as to the heart affection. As the health improves
there is a marked amelioration in all the symptoms.
The palpitation becomes much less troublesome, and the fits occur at longer and longer intervals, the Murmur becomes less distinct. There is a more healthy tone of mind, as well as of body produced. The individual ceases to meditate on his illness, becomes in every way improved. The administration of antispasmodics are of great service. Several have been recommended in this affection. Opium, ether, chloroform, Indian hemp have been employed. Dr. Thistleton has found the best results from the use of chloroform given according to the annexed formula.

1/2 fluid drachm to five

Mix a cup of

Chloroform 1/4

A teaspoonful in a wine glass of water.

Emetics are also used with great advantage, and if these none seems more efficient than a mixture of aconite. Under general constitutional treatment, I removal of the speaking of the disease, the patient gets well. This is only brought about more speedily when the attention is removed from the heart affection. The exhibition of the remedies mentioned renders valuable aid in abating distressing
palpitations, & hastening recovery.

The treatment of organic disease of the heart is merely palliative for a radical cure seems to be beyond the reach of medicine. Much however in the way of palliation can be done to alleviate the patient's sufferings & even to prolong life. The treatment contemplates the mitigation of present distressing symptoms & the postponement of evil consequences. The diet is to be reduced, & remedies employed to reduce the force of the circulation. For this purpose digitates oraconite may be used but the latter is preferable as it being less likely to cause derangement of the stomach. The mixture ofaconite with some spirit is given in the following way.

\[ \frac{1}{2} \text{ drachm aconite} \]
\[ \text{sp. common spirit} \]

Eight drops in water three times a day.

It is better to begin with small doses watching the effects & if well borne the quantity may be increased. In the early part of the disease if the symptoms are very violent leeches are often of very marked service. Few other instances oflares have been attended with decided relief. Valsalva's treatment has been proposed, tried & found to fail like
other remedies or modes of treatment having for their object a radical cure. Dr. Christian employed it in a case where it got a very fair trial, the pulsation in the chest became less, the murmur was greatly diminished in intensity, but afterward when the diet was improved the blood became more rich and stimulating all the signs returned. Cases may occur where it would be of service and is not therefore to be lost sight of in treating organic disease of the heart. The principal duty of the physician is to treat the secondary affections such as anasarca, bronchitis, spasmodic asthma & for often by the removal of one or other of these the patient experiences relief. A great part of the treatment rests in the hands of the patient himself, who, being duly instructed, is to avoid all mental or bodily excitement, indeed every cause that leads to increased action of the diseased organ. Hence it happens that by a temperate life, the individual being always aware of the nature of his malady, & knowing every thing that would increase the evil, even this disease, affecting the very fountain of life, as it were, may be kept in abeyance
of its fatal consummation long postponed.
The prognosis of organic disease of the
heart is not so gloomy as is generally believed.
A cure is not to be expected but recovery may
take place to such a degree that by constant
watchfulness and care on the part of the patient and
by the judicious treatment of secondary affections
when these supervene, life may be prolonged even
to a ripe old age. Organic disease of the heart
is not always incompatible with the enjoyment of
good health and a moderate amount of society.
In this affection the prognosis is very difficult
and it is of importance to observe the effect of treatment.
If the external as well as the auscultatory
signs improve, if the patient can take exercise
pretty well and if when secondary affections arise,
they are manageable they do not cause matters worse
than previously then the prognosis is generally
favourable. If the individual is in a sphere of
life in which he can take care of himself his
days may not only be passed in comfort but in
comparative enjoyment.

A few cases may be mentioned as
illustrating some of the previous observations.
Margaret McEneaney, 17, unmarried, admitted 28th April 1933. Has been ill 6 weeks ago with headache which was absent during the day but occurred regularly every night; she can assign no cause for this. On admission the pulse was moderately strong, 75-104, the cardiac dulness normal, the incipience strong & a left endocardial murmur loudest at the base. The sounds of the heart are loud over whole chest; tachycardia have been irregular, reappeared 3 weeks since after an absence of 3 or 4 months. She has always considerable pain at the menstrual periods. Under treatment the pulse became less frequent & the headache improved. The endocardial murmur diminished greatly & on the 9th April was very slight.

This patient appeared to be neither hysterical nor anemic & yet the cardiac affection seems to be primarily functional arising most likely from the menstrual disturbance. Other considerations favour this opinion. There is no cyanosis in the chest, there is the absence of other symptoms (e.g. diseased). The murmur is perfectly smooth, following the first sound, loudest at the base & disappearing toward the apex. The patient has never suffered
from acute rheumatism or disease of the lungs
a few received injury of the chest.
In observing this case from day to day its
influence seemed to be exerted by the frequency
of the heart's action in either increasing or
diminishing the intensity of the murmur.
Taking all these considerations into account
this appears to be an endocardial murmur
consequent on disturbance of aortic function.
Robert Stewart, aged 40, admitted 17th with disease
of the liver & also an affection of the lungs. He had
suffered from frequent attacks of rheumatism. The
heart sounds on admission were normal, the pulse
by small & weak but regular. As disease of the
liver advanced the appetite became worse, vomiting
of food more frequent, & considerable vomiting at
night. The strength failed rapidly apparently from
want of nutrition. On 1st Feb. ascites appeared
& on the same date an endocardial murmur
intermediate between the two sounds of the heart was
heard loudest at the base. TheBuilt increased
as the emaciation + debility became greater & he
died in a very exhausted state,
The circumstances in which this murmur arose,
the absence of signs of hypertrophy of the heart, and displacement of its apex. The character of the murmur and its relation to the heart's sounds, are considerations all of which seem to show that the heart was functional and caused by the state of anaemia. The man suffered from attacks of rheumatism but there were no signs of it having left any lesion of structure. On examination after death, the diagnosis was confirmed, no structural change being found to which the murmur could be referred.

James Allison, 48-25, clock, had rheumatism and an recovered flatulence, palpitation occurred. It then examined to 10. He had the heart was found to beat between 50 to 60 close to the left margin of sternum. The impulse strong and diffuse, not so fluctuated as normal. The stethoscope placed over the heart is observed to vise with each pulsation. There is a kind of double impulse communicated to the hand. With the first sound, a loud flowing murmur is heard. a slight tick or double sound with the second. On percussion the transverse dulness is normal, no secondary affection but the heart is nervous & almost rigid, it has suffered four
palpitations long previous to the rheumatic attack. This seems to be an example of an unusually small heart which having suffered from disease has become enlarged in reference to its former dimensions, there are also the signs of valvular lesion combined with an amount of functional arrangement. The hypertrophy is probably of the concentric type as this is the kind of heart in which that is generally observed. Nicotine of acetate was given as there was some pain, leeches were applied. These means were followed by considerable improvement in the symptoms. The combination of organic and functional disease renders this case very intractable. There is another case which might be mentioned it is that of Joseph Smith who has hypertrophy with valvular disease. The interesting point of which case is that the disease appears to have been latent for a long period of years but bronchitis having supervened the symptoms were developed.

William N. Colington

30th March 1863.