Valvular Disease of the Heart

A hint, but very distinct and good clues, being in very creditable acquaintance with the subject.

John Johnston.

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VALVULAR DISEASE
of the
HEART.

Up to the beginning of the present century, disease of the heart of any kind, was thought a rare occurrence. The only affection of the organ, recognized by Physicians, prior to that period, seems to have been palpitation; for their polypus is now denied a place in the category of diseases.

Perhaps, the rarity of diseases of the heart, was due rather to their being beyond all means of diagnosis which Physicians then possessed; doubtless this is the case; but still, it is now thought
that such diseases are in reality of more frequent occurrence at the present time than they were then. Without pretending to give an explanation of this increase I may allude to some of the reasons already assigned. Disease of the heart is believed by some to be hereditary, and any hereditary has a tendency to multiply itself in succeeding generations. I rather think, however, that this heredity is owing to the hereditaryness of Rheumatism, and the greater proportion of diseases of heart being of Rheumatic origin, they are so liable to increase; but it is perhaps the political posing cause, rather than the disease itself which is hereditary.

It was thought, diseases of the heart were more frequent during the French Revolution, and this frequency was ascribed to the excitement kept up in the minds of the people by the events of the time; and as any long continued excitement tends to produce
Palpitation, this effect was so produced, and it is generally believed that long continued inorganic disease may turn organic. However this was, it is clear that an excited state of the heart's action however caused must render it more liable to inflammation; and I may be allowed to suggest that the practice of tobacco smoking, which has become such a prevalent vice, especially among youth, may have a tendency to increase the liability to disease of the heart, at least I am aware of some cases where palpitation appeared to be so produced. Hypertrophy may be brought on by intemperance, and has been often found in connection with disease of the kidneys, when it is probably due to the same cause, as the disease of the kidneys, rather than the result.

It is only since the beginning of the present century that much advance ment has been made in the
Knowledge of diseases of the heart, Morgagni, Corvisart, and others, discovered, and pointed out various lesions of the organ, but the diagnosis of these lesions does not seem to have been much advanced by them, and it was only after the discovery of the art of mediate auscultation, by Laennec, in the year 1816, that Physicians had the means of arriving at anything like a correct conclusion regarding any of its diseases. The art of percussion, had been previously employed by Geuterbruger, in 1741, but it was not till after the use of the Stethoscope by Laennec, that percussions was fully appreciated as an adjunct to our means of diagnosis.

The heart is a hollow muscular organ of a rather conical form, it lies beneath, and rather to each side of the lower two thirds of the Sternum, but more towards the left side; its direction with regard to the body is
obliquely forward and to the left side.
Its base is opposite the spinal column, from the fifth, to the eight, dorsal vertebra.
Its size in health strikes the walls of
the thorax between the fifth, and sixth,
ribs, about two inches below the nipple, and
rather to the anterior side of the nipple.
It varies in size in different individuals, and is larger in man, than in woman.
Its average measurements, in health, are four inches and three-quarters, or 5 inches in length, and
three and a half, in its width, and
two and a half in thickness.
According to Lacenne, its normal size is equal to that of the closed hand
of the individual. According to Dr.
Blandin-ring, its average weight, in
four hundred cases, was nine and
a half ounces, in the male, and
eight and a quarter in the female
and, according to Dr. Reid from
ten to twelve ounces in the male,
and from eight to ten in the female.
The heart continues to increase in size as life advances.

Along with the roots of the great vessels, it is enclosed in a fibrous membrane, called the pericardium or investing membrane. This membrane consists of a fibrous structure, lined by a serous membrane; the fibrous part is united to the central tendon of the diaphragm; inferiorly, and is prolonged on the sheaths of the of the great vessels which pass through it anteriorly. The serous part is a flat sac and is reflected from the fibrous part to the heart. The cavity of the heart is also lined by a serous membrane, called the endocardium, which is a membrane, of the same structure as the internal coat of the veins, with which it is continuous. It is stronger on the left side of the heart than on the right.
The structure of the heart is chiefly muscular, but consists also of a considerable amount of fibrous tissue, of which are formed the rings surround- ing the auriculo-ventricular, and the great arterial orifice, the chordae tendineae, and middle part of the valves. There is more fibrous tissue on the left side than on the right.

Under the head of "Diseases of the Heart" are generally included, diseases of the pericardium, endocardium, and of the substance of the heart proper. My attention shall be chiefly confined to diseases of the endocardium and more especially that part of it entering into the constitution of the valve of the endocardium. The parts most liable to be attacked by disease are the valves, and the most frequent disease, by far, is inflammation, and that inflammation generally of the rheumatic character. The left side of the heart is found diseased.
much more frequently than the right side. The greater liability to disease of the left side, has given rise to various different speculations regarding its cause. Some have given as a reason the different quality of the blood; Hope thinks it is owing to its greater functional activity; Corvisart holds that it was owing to the greater amount of fibrous tissue on the left side. And this is the opinion generally held at the present time, and probably the correct one; because the inflammation is generally rheumatic and rheumatism being a disease peculiar to fibrous tissue the greater amount of this tissue on the left side, renders that side more obnoxious to the disease than the right side.

Inflammation of the endocardium is generally local, though in some instances it is found extending over the whole membrane, rendering it watery and opaque.
Local inflammation of the endocardium generally attacks the valves, and the result is a throwing out, or evagination, of lymph, either upon or under the inner membrane, producing organic change of the part, giving rise to certain wart-like excrescences, and, giving a tendency to osseous, cartilaginous, and atheromatous deposits.

Disease of the valves is more frequent on the left side, than on the right side of the heart, but cases of disease of the right side are not wanting. Dr. Latham thinks that in one third of the cases of disease of the valves of the left side which he has seen there was disease of the right also. Dr. Hope thinks this complication occurs in one in every four and a half or five cases, but when both sides have the valves affected those of the left side are more so. Dr. Bennett thinks the proportion of cases is much less.
The opinion of Inflammation of
the Endocardium, is strengthened by
the frequency with which it accom-
panies Articular Rheumatism.

Dr. Watson thinks that, the half of
the cases that came under his notice
occurred during, or after an attack
of Articular Rheumatism. In one-
hundred and thirty cases that were
attacked in St. Bartholomew's Hospital
by Dr. Salham, the heart was affected
in ninety-one. The Endocardium
in seventy-four or more than
a half. It is not unreasonable
able to suppose that we may have
Rheumatic Endocarditis, without any
Articular Rheumatism. There have
been cases, in which, the affection
of the heart preceded that of the
joints, but, may it not attack the
heart alone without going any farther;
just as it is sometimes seen to
attack one joint without going further.
For is it necessary to have recourse to the phenomenon so frequently. For
and an explanation of the implication of the heart during an attack or
articular rheumatism. For being, what
is called sometimes, a blood disease,
it is liable to attack any part that
is subject to its influence as the heart—is. Rheumatism is more frequent after
the period of puberty, so also is bron-
carditis, probably because after that
period of life persons are generally
more exposed to the exciting causes
of all kinds of inflammation; for
the same reason perhaps it is more
frequent in males than females.
Cases of rheumatism do occur before
the age of puberty, however, and then
it is thought that a heart is more liable the
to be implicated than in the adult.
Dr. Watson says he has only seen three
cases, before that period, in which
the heart was not affected, and
he is not sure that two of these three
even rheumatism at all, or not.

The result of inflammation attracting the valves of the heart is the forming out of lymph either upon their free surface, or between the folds of the endocardium which enters into their formation. In the latter situation it causes them to become thicker, and less pliable, and renders them narrower and puckered up, impeding or altogether stopping the discharge of their function.

When it is thrown out on their free surface, it causes the valves to be appressed together, by their edges, leaving sometimes only a slit, like a button hole, for the passage of the blood.

The valves, thus thickened by fibrous deposit, are apt to become the seat of cartilaginous, or osseous deposit, especially in aged people, who are most liable to these deposits; indeed, some writers have thought that it was a natural consequence of old age, but it probably only
Falls place under the influence of some exciting cause.

Concerning the formation of the wart-like excrescences, as often found in the heart, after endocarditis, many different theories have been advanced. Laennec thought they were nothing more than small polypi or papillary concretions, "which, being formed, on the sides of the valves, or auricles, become organized, by a process of absorption, or nutrition, analogous to that, which, "converts abnormalous false membrane, "into, adventitious membrane or cellular "tissue."

Heyde, Martin and Bouillaud attributed their formation to fibrine thrown out on the surface of the membrane during inflammation. Corvisart thought they were venereal products, to which they bear a great resemblance.

Dr. Hope's opinion is that they owe their origin to inflammation
modified by some other action, dependent either on the constitution or previous lesion of the parts affected.

Dr. Watson says "it is certain that they are connected with inflammation of the lining membrane of the heart. But are produced by fibrin deposited from the blood upon the inflamed part." and this seems to be the opinion now generally held; namely, that they are formed by the deposit of minute particles of fibrin, on a part previously altered by inflammation, so as to acquire a power of attracting the fibrin from the current of blood passing over it. These minute excrescences, or vegetations may be found on any of the valves, or on the surface of the lining of the auricles; but they are more frequent on the left side, and the aortic valves are their common site.

Sometimes they are separate; at other times arranged in clusters.
but their most common arrangement
is in rows, along the edges of the
valves, like rows of beads.

The effect of these deposits, either
upon, or within the valves, will be
to impede the flow of blood through
the orifices, by diminishing their calibre;
causing a stagnation from an
imperfect discharge of their function.

most commonly both of these states
are present together, these changes—
lead to alterations in the muscular
structure of the heart, and many other
discrete results, which results are—
different according to the valves affec-
ted.

Constriction at the aortic orifice
produces hypertrophy of the left
ventricle, and that generally accompa-
nied by some amount of dilatation.

how the hypertrophy of the ventricle
is, rather a provision of nature for
the prolongation of life, than a
disease; and is produced in accord-
ance
with a law, that applies to the healthy growth of muscular tissue in other parts, namely, that the increased exercise of a part leads to an increased flow of blood to that part, and, according to Mr. Bayot, to an increased accumulation in that blood, of the material required for the nourishment of the part.

The obstruction excites the ventricle to a greater force of muscular contraction, to propell the blood through the narrowed orifice.

The dilatation is caused by the presence of more blood in the ventricle than the size of the orifice allows to pass out.

The mitral valves are liable to the same changes as the aortic, but while warty excrescences are more frequently found in the aortic, recrudescence is a more frequent occurrence at the mitral orifice.

Constriction of the mitral orifice must prevent the flow of blood
into the left ventricle, and thus lead to dilatation of the left
ventricle; and, may sometimes, it is said, excite to hypertrophy of the auricle.
Hypertrophy here, however, is found to be of rare occurrence; dilatation alone,
being the general result, of constriction of the mitral orifice. Because says
Dr. Hope, "The action of the auricle
is naturally less energetic than that
of the ventricle."

Dr. Hope's explanation is, that the
ventricle, has a much more laborious
function to perform than the auricle,
and so it is proportionally more
substantial and robust, so that a
force sufficient to dilate the auricle,
is only sufficient to dilate the ventricle. Dr. Hope also thinks
that, constriction of the mitral orifice,
is the most frequent cause of hypertro-
phy of the right ventricle, operat-
ing in a retrograde direction through
the lungs, causing congestion in
Louis however maintains that the right is often by participation...
in them, or perhaps asphyxia, in the same manner as hypertrophy or dilatation may be caused by congestion, or asphyxia from other causes; or as is more frequently seen, in emphysema of the lungs, or in some cases of advanced phthisis.

Disease of the valves of the pulmonary artery, is much less frequent than that of the aorta, already mentioned, but in its effects must act upon the right ventricle, by impeding the flow of blood through the orifice.

Dilatation of the right ventricle occurs more frequently than that of the left; perhaps on account of its weaker constitution.

Dr. Bestin thinks that the greater tendency to hypertrophy, in the left ventricle than the right, is owing to the more stimulating quality of the blood in the left, and has founded this opinion on the observation that hypertrophy of the
right ventricle, in most cases, accompan-
ies patrescence of the foramen ovale.
It was thought by Stopic, and others
that hypertrophy of the right ventricle,
was the common cause of pulmon-
ary apoplexy. Dr. Hakea says,
"The haemorrhage resulting from this
cause, consists of fluid, red blood, is an
active arterial haemorrhage, and is
essentially different from that passive
species which results from retardat-
ton of the blood in the venous cap-
illaries of the lung."
Dr. Watson says, on the other hand,
that he has never met with pul-
monary apoplexy, coincident with
more hypertrophy of the right
ventricle; and attributes it to the
mechanical congestion, caused by
the constriction of the mitral valves.
The hypertrophy here also is only a
pernicious of nature against the obstruc-
tion, and that obstruction, when at
least, constriction of the pulmonary
orifice, must naturally tend to check
the impulse given to the blood, by
the hypertrophied ventricle.
Nevertheless haemoptysis dependant
upon congestion of the lungs very fre-
quently occurs along with hypertrophy
of the right ventricle, but then it
arise from disease of the mitral
valve, as does the hypertrophy, unless
there is also disease of the valves
at the pulmonary orifice, which
is seldom found to be the case.
In the same way disease of the
mitral valve is a frequent cause
of dropy, first causing congestion
in the lungs, and through this
an impediment to the entrance
of the venous blood to the right
side of the heart, thereby causing
congestion of the liver, stopping the
flow of blood from the hepatic veins,
and so giving rise to general
anasarca, dropy.
When the lungs are so congested, they are rendered peculiarly liable to in-
flammation, when exposed to any of the usual exciting causes. Bronchitis is
especially is found to be a very frequent concomitant of long stand-
ing disease of the valves of the heart.

The brain also may become affec-
ted during disease of the heart, giving
rise to convulsions, delirium, chorea,
coma, or palsy; all of which symp-
toms have been observed during the
disease, and indeed so violent as
they sometimes become, that they
have frequently been referred to disease
in the brain itself. When on a
post-mortem examination, no ap-
pearance of a morbid kind could
be found in that organ, to ac-
count for the symptoms, which
could only be referred to the
disease of the heart.

Disease of the truncus or
right auricular valves is very rare.
when it does occur, it must, necessarily, cause venous congestion, in the systemic capillaries, and prevent the sufficient oxygenation of the blood, by impeding its passage into the lungs; but I have seen no cases of this kind and have found very little written on the subject.

I have mentioned these consequences as occurring from constriction of the valves, of course, regurgitation from incompetence will tend to produce the same effects, or perhaps a minor degree, but occurring with constriction, which is generally the case, the symptoms must be aggravated by it.

Osteous deposits are always found beneath the membrane; there may be none alone, or, in combination with cartilage. In many cases, where the lining membrane of the heart, has been been beet with cartilaginous deposits, the person
have been known to be habitually inconstant for a length of time. or, others have been habitually licentious lives, and subject to grief. In other cases the individuals have lived only in a way likely to preserve health.

Disease of the valves of the heart produces an alteration of the natural sounds of the organ, or may abolish these sounds altogether, and take their place; but, before proceeding to give an account of the sounds so produced, it will perhaps be right for me to say what the nature of these sounds is, in a healthy state of the organ, and how these sounds are now believed to be produced.

The normal sounds of the heart are two in number, commonly called first and second sounds, or sometimes systolic and diastolic. The first, or systolic sound, is
heard loudest at the apex; the second or diastolic loudest at the base.

The first sound is dull, deep, and more prolonged, than the second, and corresponds with the contraction of the ventricles, and the impulse of the heart against the walls of the thorax, and immediately precedes the pulse, as felt at the wrist.

The second sound is sharper, shorter, and seems nearer to the ear, than the first; it coincides with the contraction of the auricles. As is remarked by Dr. Williams, these sounds are pretty well imitated by the pronunciation of the two syllables dup. dupp.

Concerning the way, in which these sounds are produced, various theories have been held by different authors at different times. Laennec attributed the production of the first sound to the contraction of the ventricles, and the produces...
of the second, to the contraction of the auricles. It is now however generally believed, that, the first sound, is produced, by the closing of the aortic-ventricular valves. The contraction of the ventricles, the lifting of the apex, against the ribs, and the rushing of the blood through the intimal orifices; and, that the second sound, is produced by the flapping together of the aortic valves only.

By disease of the valves these sounds become changed in their character, and blowing murmurs either accompany them or take their place.

These abnormal sounds generally resemble the blowing of a pair of bellows, and are sometimes called "Bruitso-ite souflet" but, of this sound there are many modifications, from a gentle blowing murmur, up to a coarse rushing, or sawing sound. Sometimes we have a musical sound produced.
These murmurs are produced by anything that obstructs the flow of blood through the orifices of the heart; or, by such an incompentence of the valvular apparatus as allows of regurgitation of blood through it.

But a murmur does not necessarily imply disease of the valves for we may have it arising independantly of valvular disease; at least a murmur of the first sound may also depend on, an alteration of the blood, as in anemia, or on dilatation of the aorta.

A murmur is said to be single, or double, as it accompanies one sound, or both.

We may have only a single murmur, when two valves are diseased; or, a double one when only one valve is diseased. From constriction of the aortic orifice there will be produced a systolic murmur, while from incompetence of
Paceto however by action of fuel
cells
its aortic values, is produced a diastolic murmur. From constriction of the mitral orifice there may be produced a diastolic murmur. Though this is said to be rarely the case, on account of the slight propelling power of the auricle, while mitral insufficiency there is a systolic sound from regurgitation. Thus, there may be only a systolic sound when both the aortic and mitral values are diseased; or a double murmur, when only the aortic value is diseased. The systolic, from the obstruction to the flow of blood through the orifice, and the diastolic, from the regurgitation, allowed by their imperfect closure.

Before the art of auscultation was discovered by Laennec, physicians were without any means by which they could arrive at any precise conclusion, regarding the disease of
of the valves at all; and, even by him, the diagnosis of the exact locality of the disease was left in a very imperfect state; for, as he supposed the production of the second sound to the contraction, and did not seem to have been aware of the occurrence of respiration, or at least of its effects, so he very naturally supposed that the diastolic murmur was produced by obstruction at the atrioventricular orifices; (which, is now known to be seldom the case) and that the systolic murmur was only caused by obstruction at the arterial orifices. If this had been the case the diagnosis of the situation of disease would have been a comparatively easy matter. This fallacy was, however, corrected by Dr. Hope's experiments; by means of which he discovered the effects of respiration, and, at more satisfactory explanation of the means,
by which the second sound is produced. Still much was wanting to render the site of the lesion definable; for as a systolic murmur might be either caused by a disease of the aortic, or mitral valves, it was still necessary to devise a means, to determine, by which of these, it was produced.

This difficulty was at length pretty well overcome, by the application of two facts, thus stated by Dr. Lamar.

"First: that endocardial murmurs, are most plainly audible, at that part of the precordial region, which is nearest to the orifice from which they proceed. And second; that, endocardial, are conveyed, sometimes in one direction, sometimes in another, and that the orifice from which they proceed, determines in each particular case what that direction shall be."

And so by following out the course of the sound, we are at
last able to condescend, pretty accurately, upon the particular values of
feetd. The diastolic murmur de-
notes either aortic regurgitation, or
mitral obstruction; and according
to the above rules, if it is heard
 loudest at the base, and is prolonged
on the great vessels, it depends on
aortic incompetence; if on the other
hand, it is heard loudest at the
apex, (which is rarely the case) it denotes
mitral obstruction. So also, with
regard to the systolic murmur:
if it is heard loudest at the
aorta, it denotes mitral insufficiency;
while, if it is heard loudest at
the base and prolonged on the
great vessels, it denotes aortic
insufficiency obstruction.
This last kind of murmur is the
most frequent of all; but, as
it may depend on one other cause,
namely, either an abnormal state
of the blood, or on dilatation
of the aorta, we cannot determine construction of the aorta orifice by it alone. This leads to a consideration of the means by which we may distinguish mere functional disorder of the heart, from organic disease of the azygoidal valve, which it simulates.

According to Dr. Walsh, "the main points between functional blood murmurs, and those produced by organic disease, are to be sought in the circumstances that functional blood murmurs are always accompanied by a continuous humming sound in the veins, and are never permanent, or of high pitch."

This venous hum is to be sought for, by placing a stethoscope over the jugular veins. Dr. J. E. Williams says, "whenever the venous hum accompanies the venous hum in anaemic persons, we may infer that the abnormal murmur is
the heart is of a purely functional character." Lacunae says. "The "tinnitus" murmur may occur without "any organic disease of the heart." and remarks; "That the sole disorder. "which almost constantly accompany-"-ing it—is, a more or less intense "state of nervous agitation."

The place where the murmur is heard loudest, and the time of its occurrence, is a matter of great importance; for, if the murmur be diastolic, then or heard loudest at the apex, then we infer at once that the murmur is organic; while if it is systolic, and loudest at the base, then it is either organic, or functional; and it is only by attending to the general circumstances of the case that we can arrive at a proper diagnosis of which it is. If the patient has had, or still has rheumatism, then
the murmur is very apt to be organic. But, under certain circumstances, I conceive we might be led into error, namely, if excessive blood-letting had been practised at the commencement of the attack of Rheumatic fever; as has been the case. For as a murmur may be caused by anaemia, however brought on; so in a case where excessive blood-letting has been practised, we might have a systolic murmur produced, by the anaemia so produced, which we would be very apt to mistake for an organic murmur, arising from inflammation attacking the aortic valves. The age of the patient must also be attended to. Junction of disorder of the heart is most common in young, and sanguine men; and in young, and anaemic or chlorotic females between the ages of 15 and 25.
while, organic disease is more frequent after that period of life is passed. Palpitations arising from functional disorder, are more apt to come on, when the patient is at rest. Palpitations arising from organic disease, are always relieved by perfect quietude. Functional palpitations are relieved by moderate exercise; while, those arising from organic disease are increased by exercise.

When palpitations have been preceded by severe derangement of the digestive organs, that is in favour of their being of functional origin; and sympathetic; for, although, organic disease is often accompanied by dyspepsia, yet the symptoms are seldom severe.

Hypertrophy is much more common in organic disease than in inorganic, if it has been of any considerable standing.
Dr. Latham states that, "When the impulse, and sounds increase together, "there is probably no hypertrophy, but the "heart is probably only acting more "forcibly than natural. When the "impulse, and sounds decrease together, "there is probably no atrophy, and "the heart is acting more feebly than "usual, from mere deficiency of "nervous energy."

In Rheumatic an advanced state, there is often a functional murmur, produced, perhaps, by the condensation lung, pressing the great vessels.

A functional murmur is always single and displaces or accompanies the "first sound; it never precedes it. "The sound may be loud, or diffuse, but it is always smooth and soft. "Functional disease generally causes "no more dyspnoea than is consistent "with the weakness of the patient. "There is seldom any oedema.

In females there is often some
uterine disturbance. Sometimes endo-
cardial murmurs are found in
persons of apparent good health,
whose form, history, or appearance
there is no reason to suspect either
organic, or functional disease. Dr.
Christie mentions some of these cases
coming under his notice for the first
time, in examining persons in-
behalf of an insurance company.

In organic disease the general
symptoms are, palpitations, increased
by exertion; pulsation in the tem-
poral arteries increased; giddiness;
there is sometimes a liability to
faintings; the pulse at wrist is
often stronger than natural, having
an uneven feeling to the finger—
sometimes it is not synchronous
with the impulse of the heart—
often irregular; there is generally,
an expression of alarm, visible
in the countenance; there is
generally a minor degree of dyspnoea.
In acute endocarditis, the patient lies on his back, keeping the body very still, perhaps throwing about the arms; the skin is hot, there is thirst, often headache, and the usual febrile symptoms.

The local symptoms are not very marked, there is little or no pain, but often a feeling of discomfort and uneasiness about the heart with palpitation.

Endocarditis may prove fatal in its early stage, but this seldom is the case, unless the lungs and their membranes are also affected, and then there is also pericarditis; or generally so; or it may be resolved without leaving any traces of its existence. These cases would seem to be the exceptions however for it generally leaves the valves in an impaired state, more or less; but when the disease is
not very great, a person may, with proper care, enjoy otherwise good health for a long period. If the symptoms depart quickly, if the secondary affections, such as bronchitis and dropsy, are easily endured, and the patient can lead a favourable kind of life, the continuance of life does not appear to be incompatible with a considerable amount of disease. But the patients are always liable to sudden death, are apt to drop down in a fit of syncope, when they make any exertion. Women in labour sometimes die suddenly from disease of the heart. Such persons must also be liable to a repetition of the attack. In a secondary attack of inflammation, and especially of rheumatic inflammation, it is very apt to follow the course of the primary disease. The deposit also left from the inflammation is liable to become changed.
viscous or cartilaginous deposit may follow, filling an entire strip in the action of the valves, or, the capillaries become narrower, the flow of blood is obstructed, and all the other sequelae follow: congestion of the lungs, and deposit, with all their symptoms, till death puts an end to the sufferings of the patient.

The treatment recommended by different authors, is somewhat different in its kind. Bouillaud practiced copious bloodletting in the acute stage of the disease, followed by purgatives, without the use of mercury, and thought that by this means he could cut short the inflammation in its commencement.

Dr. Latham places his greatest confidence in mercury, with the assistance of moderate blood-letting and purgation.
Dr. Watson seems also to place much confidence in mercury. He says, "When
the gums begin to rise there is always
"according to my experience a mani-
"fact subsidence of the symptoms; less
pain, less palpitation, less dyspnoe.
Dr. Velche also thinks that blood-
letting by leeches, or cupping - and
mercury are the best remedies, in
the acute stage; and, when the disease
is subsiding into the chronic state,
he thinks iodide of potassium is
useful with liquor potassae, and
iodine given internally, and
iodineunctions over the heart
externally.

The treatment now generally
adopted here, is leeching over the
cardiae region, in the acute stage;
when the symptoms are violent, with
a blister afterwards. The diet is
kept low, perfect quietude enjoined,
anaesthesia, and antispasmodics given
internally, or calomel and quinon
If there is also acute rhinorrhoea, that is also attended to, by the use of the usual remedies, as Colchicum or Hydrate of Bichlor.

When there is diarrhea, or anaemia, diarrhoea, or diarrheatics are used, to act on the kidneys, or produce sweating.

When there is bronchitis, that is treated by expectorants and antiseptic medicines.

Gastric irritation is another frequent concomitant, to be treated by giving tonics and antacids, and the state of the bowels must be attended to.

When the patient has recovered from the attack, it will be necessary for him to be very temperate in his habits, avoiding all stimulants, living in a temperature as equal as possible, avoiding all damp and cold. And it will be necessary for
him to choose some easy occupation to avoid all kinds of exertion such as running, lifting heavy weights, carrying heavy loads, going up low flights of stairs; in short he should avoid doing any thing to increase the circulation. He should also be careful regarding his diet, and take nothing likely to produce dyspepsia, and thus his bowels regulated.

John Silmonstone