

**Further observations on the diagnosis of fatty heart, and on smoking, etc.,
as causes of the disease / by Henry Kennedy.**

Contributors

Kennedy, Henry (Physician)
Francis A. Countway Library of Medicine

Publication/Creation

Dublin : Fannin, 1864.

Persistent URL

<https://wellcomecollection.org/works/fc3vu2yx>

License and attribution

This material has been provided by This material has been provided by the Francis A. Countway Library of Medicine, through the Medical Heritage Library. The original may be consulted at the Francis A. Countway Library of Medicine, Harvard Medical School. where the originals may be consulted. This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



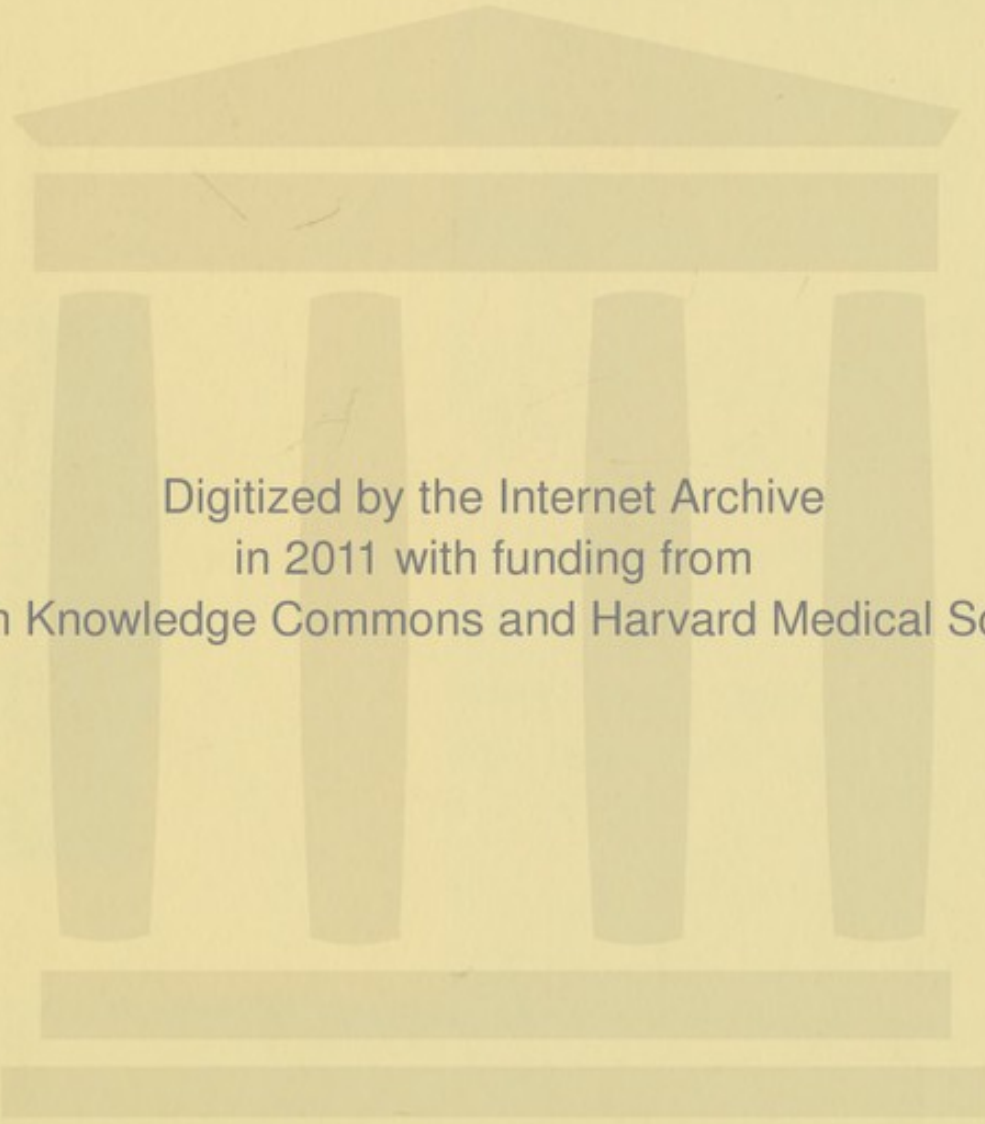
Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



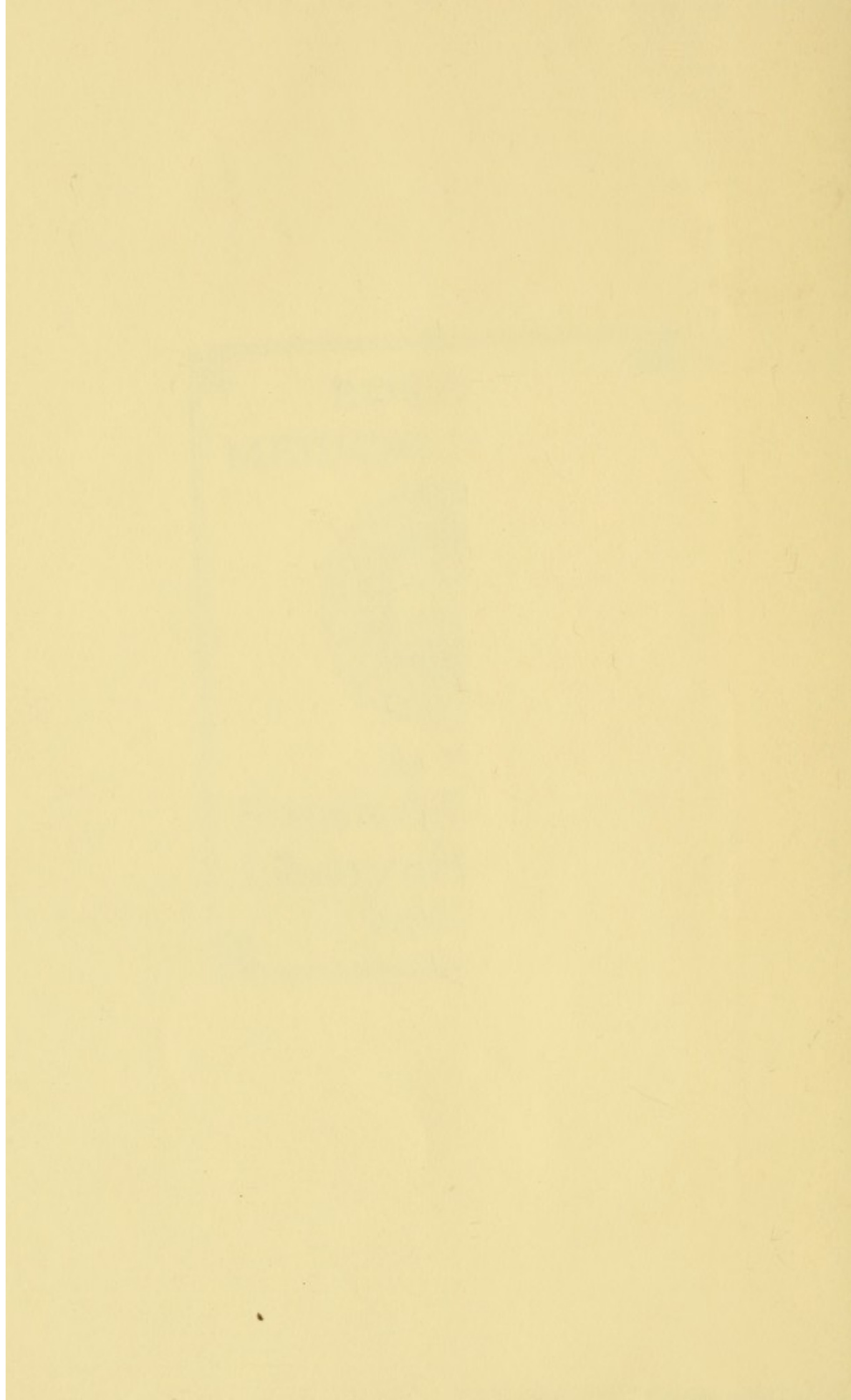
BOSTON
MEDICAL LIBRARY



IN THE
Francis A. Countway
Library of Medicine
BOSTON



Digitized by the Internet Archive
in 2011 with funding from
Open Knowledge Commons and Harvard Medical School



With the Winter's Camp.

FURTHER OBSERVATIONS
ON THE
DIAGNOSIS OF FATTY HEART,
AND ON
SMOKING, ETC.
AS CAUSES OF THE DISEASE.

BY
HENRY KENNEDY, A.B., M.B.,
ONE OF THE PHYSICIANS TO SIR PATRICK DUN'S HOSPITAL.

(Read before the Surgical Society of Ireland, March 1864.)

DUBLIN :
FANNIN AND CO., GRAFTON-STREET.
1864

The Western Library

FURTHER OBSERVATIONS
ON THE
DIAGNOSIS OF FATTY HEART,
AND ON
SMOKING.

20321 Bi.16

HENRY KENNEDY, A.B., M.B.,
OF THE PRINCIPALS TO THE FAYRICK BURN HOSPITAL.

Liverpool: Printed for the Liverpool Society of Medicine, (March 1884.)

DUBLIN:
KENNEDY AND CO. GRAFTON-STREET.
1884

ON THE
DIAGNOSIS OF FATTY HEART.

IN the year 1849, I had the honour of reading before this Society a short paper on fatty heart, its chief object being to suggest the possibility of completely curing that state. At that time the idea met much opposition; but since then the views of many seem to have changed, and I am not aware of any of the standard works which have appeared of late years on diseases of this organ that do not entertain the question. It is scarcely necessary to state that my remarks applied to the disease in its early stages. The line of argument I pursued was given at much greater length in a paper published ten years later in the *Edinburgh Monthly Journal*; and as it was thought worthy of being transferred *in extenso* to some of the Parisian and American periodicals, it is but fair to infer that it had some value in it. Still it may be doubted whether the points which were advanced at the time of which I speak are as widely known as they appear to me to merit, and it was to call attention to them again briefly, as well as to add the result of a few years' additional experience, that I now come before you. I wish it, however, to be clearly understood that the following remarks are to be considered as strictly cursory, many things being pur-

posely omitted, and the subject, as a whole, being much too extensive for a communication of this kind.

That fatty heart is a disease of great moment to have a knowledge of, few, I presume, will be inclined to question; and its being common ground, if I may so speak, to both physician and surgeon, is a good argument for bringing the subject into this place. It is now known to be a disease of frequent occurrence, and there can be no doubt that many a well-planned operation, as well as medical disease, terminates fatally owing to its presence. Besides, too, surgeons now constantly use chloroform, and it is not necessary to do more than advert to the fact of the number of deaths which have occurred when this powerful agent happened to be used in cases of fatty or weak heart. All the deaths in Snow's book were, I believe, of this kind; so that, if it were for this reason alone, the subject demands the closest inquiry, and without further preface, I shall now proceed with such points as seem worthy of notice.

Very early in the inquiry I was struck with what seemed to me the rarity of valvular disease; in union, I mean, with fatty heart. But an impression of this kind required facts to either prove or disprove it; and so I set about collecting cases, and in a short time made out 53, which formed the data on which the paper of 1849 was founded. By the year 1859 these had increased to 205, and from that to the present time I have tabulated 40 more; so that the entire number now reaches 245 cases of fatty heart. What, then, is the result? Why, that out of these there were

Cases with valvular disease and fatty heart	33
---	----

Cases of fatty heart alone	212
--------------------------------------	-----

This gives a proportion of 7 to 1; that is for each single

case where the valves were diseased, there were 7 where it was not so. This is even a larger proportion than what I at first got, and seems to establish a fact of no little consequence in the history of fatty heart. For if it be true—and in this instance I think statistics have been fairly brought to bear—it must follow that in the large majority of cases of this disease we need not expect to find any valvular sound. Many of the profession, even up to the present period, think that if there be no morbid sound over the heart, the organ must, therefore, be healthy; and it is common to read of cases where chloroform was being used, and where it is stated that the ear having been applied to the chest the sounds were found normal. With the facts stated above, the sooner such an idea is given up the better. Mistakes in diagnosis will, and indeed I have reasons for thinking they do occur, from not being aware of them. How cautious, too, with this knowledge before us, should we be in reference to insurance on lives. Fatty change we know often occurs under the very opposite circumstances to what we should expect. Hence the greater need of caution. But there is another point of view in which the subject may be considered, and that is where we meet such cases as it seems likely may be benefited if not cured by treatment; we now know that, very generally speaking, we will have no valvular disease to contend with, and this affords an essential difference between the disease under consideration and the other affections of the heart.

This absence, too, of valvular disease goes far in accounting for what I know is not uncommon, that the pulse may continue to beat steadily, say at 80, up to the last moment of existence; in this way we may be very

readily thrown off our guard, and this point is very strongly borne out by the fatal cases from the use of chloroform detailed in Snow's book and other places, where it is expressly stated that the pulse kept good till the very instant death occurred. In fact, as is well known, the death is apt to be very sudden, whether chloroform be used or not, and this is due on the one side to the morbid change which has occurred in the muscular texture of the organ, and on the other to the absence of valvular disease; and thus it is the radial pulse goes on to the very last, affording a marked contrast to what occurs when valvular disease exists, for then there is nothing more common than for the pulse at the wrist to have ceased days before death, as I am sure all present have witnessed.

But when valvular disease does exist with fatty heart, there are two points worthy of note: the first, that it is the aortic valves which are very generally involved, leaving the mitral free; and secondly, that the kind of morbid change is peculiar. The valves are commonly thickened and leathery, being fatty as contrasted with ossified valves. Now this state of the parts is, in many instances at least, quite capable of preventing regurgitation, for the valves will not allow water poured from above to pass, as I have repeatedly tested, whilst it very curiously, I must say, confirms the diagnosis of fatty heart as derived from physical signs, and which Dr. Stokes gives in his able work, but does not enter into the explanation of, nor indeed does any other writer. That gentleman, in fact, from clinical research, arrived at conclusions, the truth of which are now fully confirmed by what has been added by myself from the study of the morbid anatomy of the disease. Of these physical signs, however, it is not my

intention to speak. They are all fully given in the work to which I refer.

The last point connected with the morbid anatomy of fatty heart to which I would ask attention is the enlargement of the organ. It was noticed in more than half the cases—if I recollect right above 80—given in Quain's able paper on the subject, but no deductions seem to have been drawn from the fact. I believe it, however, to be one of much consequence, and, in my own experience, it has been much more frequent than ever Quain's table would support. In truth, I am forced to look on it now as the most common state which exists with fatty heart. It has seemed to me that when an abnormal quantity of fat is deposited on the heart—and this I believe to be far the most common form to meet with—that enlargement of the muscular fibres must ensue, just as surely as we know it does when valvular disease exists, though probably more slowly; and though I am aware that high authority makes light of a deposit of this kind, I cannot persuade myself but that, in proportion to its unnatural quantity, it causes more or less impediment to the free action of the organ. At any rate, in whatever aspect we view this state, it is certain that in very many cases where fat exists in too large quantity the muscular substance becomes hypertrophied, from which certain deductions and facts follow, of which more again.

For so far the attention of the Society has only been called to three points in connexion with the morbid anatomy of fatty heart, and it will have been observed that no allusion has been made to the divisions of the subject given by authors. This was done intentionally, and not with any idea of underrating the great distinction which exists between true

fatty degeneration of the heart, where this organ is not enlarged or may even be atrophied, and that form of the disease where fat exists in too large quantity, and is commonly attended, as has been already stated, with enlargement of the organ. The truth is, that the latter is by much the more common state to meet, and I wished to speak of it on that very account. In my own experience I have met but very few examples of the true fatty change, only seven in all, and it is worthy of note that in four of these recent pericarditis was found, and was the more direct cause of death. In only one of these had I a suspicion of the existence of the latter disease.

Into the general diagnosis of fatty heart it would not be possible to enter here, and I shall therefore confine myself to one or two points in reference to those cases where there exists no valvular disease, and which you will recollect are by much the greater number of those we meet. It is, too, of the earlier stage of the disease of which I would be understood as wishing to speak, for it is then the diagnosis becomes really of the greatest consequence, whilst it is scarcely possible to mistake it when the disease is at all advanced.

Of the several symptoms of fatty heart few have been more noticed than the state of the pulse. When I spoke on this point myself some years back, I thought well of using caution in what was then advanced. But I believe I may now say that of all the symptoms, it, as a single one, affords us the most assistance in the diagnosis, and for the sake of description may be spoken of under three aspects: the slow pulse, the natural one, as regards the number of beats, and the rapid one. I do not say anything of the irregular or intermitting pulse, as in my own

observation it has been rare, and is common, I believe, to all states of the pulse, whether the heart be fatty or not.

More has been written about the slow pulse of fatty heart than any other variety, and it is unquestionably a very valuable sign, and always sure to catch attention. In this city it has been brought under notice by Drs. Stokes and Fleming, and our able Secretary, Dr. Richardson, has detailed some interesting cases. I would ask, however, is it usually present? I believe not. Within my own experience it has been very exceptional; but I am speaking now of a pulse under 40. When it does occur, however, there appear to me very good grounds for supposing that the true fatty degeneration exists, and the greater the degree of the latter the slower the pulse becomes. On a former occasion I expressed my doubts as to what state of the organ gave rise to the very slow pulse, but a more enlarged observation has enabled me to arrive at the conclusion stated. The comparative rarity, however, of this very slow pulse lessens, I must repeat, its value as a diagnostic sign.

But the pulse of fatty heart may be the very opposite to slow, being permanently quickened, and of course above the natural standard. On this point I can find only the slightest allusion in the works on diseases of the heart, the bare statement being all that is said on the matter, yet I am satisfied it is one of very great consequence, and still affords a wide field for accurate observation. It is some years now since this particular part of the subject was gradually forced on my notice by the fact, which has indeed been long known to physicians, that fat people are, *cæteris paribus*, bad subjects for fevers. Whilst seeking some cause for this, I found that in such the heart had

always more fat on it than was natural, and this state, coupled with what we know now of the effects of the fever poison, explains clearly the results. Two such instances I saw some time back, both ending fatally. One of these, a case of scarlatina in a gentleman close to forty years of age, was seen by Drs. Hutton and Nowlan; and the other, a gentleman somewhat older, was attacked with typhus, and was seen by Drs. Corrigan and Lyons. In both cases the pulse became very rapid, and early, it is to be observed, in the attack. Dr. Stokes has in his able work called attention to the great importance of recognizing this state of the heart in connexion with acute diseases. But it is the great and early occurrence of a rapid pulse, especially in men, to which I wish to draw particular attention. When this state of the heart exists, any disturbance of the system may set the pulse going at this rapid rate, and in Latham's elegant work will be found some marked instances of this; at the same time he avows there were no symptoms present to lead him to suppose the heart was fatty, though proved to be so after death. In fact, it does not seem to have struck him that there was any connexion between the rapid pulse and the state of the heart. But this, as it appears to me, is the point of importance to notice. It is now several years since a case got into the public papers and so acquired but too much notoriety. Some whom I address may recollect it, as being the case of a gentleman who, for an attack of gall-stones, got laudanum, necessarily in very full doses, which acted so powerfully as a narcotic that it required some hours' persevering efforts to recover him. When recovered, he came up to Dublin a few days later, where he was seen by different medical men, who could discover nothing wrong but a quickened

pulse. In this state he lived more than a week, and then died. On post-mortem examination the heart was found fatty—a state which had not been suspected previously.

But it is not in acute disease alone that a great rise in the pulse, and in connexion with fatty heart, may be found. There appear to me very good grounds for supposing that in the progress of some cases the pulse becomes quickened *and remains permanently so*. On this point, however, I would speak with caution; not because I doubt the fact, but because its complete elucidation demands a kind of experience which it is hard to acquire—I mean an experience which extends over years. One such case which has been seen by Dr. Stokes has, however, occurred to me. A gentleman, now above forty, and of a full habit of body, has been under my observation for eight years. Till about four years ago the pulse remained at the healthy standard, beating 70 in the minute. At that time, and just after a severe cold, I observed that it did not fall, as was to have been expected, for the other symptoms had disappeared, and from that time to the present the pulse has never fallen below 90, and I suspect never will. There is not the slightest reason to suspect any lurking disease in the lung which might keep up the pulse, and there is no morbid sound to be heard over the heart. But there are grounds for believing that gout is in his system, and when older he will very probably have the disease.

In another case, a woman of 50, whom I saw with Mr. McCarthy of Capel-street, I suspect the same thing has occurred. When I saw her she laboured under pleuritic effusion, from which she entirely recovered, but the pulse has never fallen to the natural beat, and is now capable of being raised from the slightest cause. Neither is there in

this case any ground whatever for suspecting that the lungs are affected, whilst there are good reasons for supposing that the poison of gout is in the system. This part of the subject is still very open for investigation.

I have reserved for the last place some remarks on the kind of pulse in connexion with fatty heart, which I believe to be of far the greatest consequence to recognize, and for the simple reason that it is by much the most common—I mean when the pulse beats neither too slow nor too quick, but at the healthy standard. When speaking on this point in 1859, I did so with some reserve. Since that period, having become connected with Sir Patrick Dun's Hospital, my opportunities for observation have much increased, and I am now able to state that the diagnosis can very generally, if not always, be made. It will be recollected that the great probability is you will have no morbid sound to guide you at all, whilst the pulse will be beating at 65 or 70. Under such circumstances, what then can be a guide? The answer is the kind of pulse which would be caused exactly by the state of the heart described already this evening, as being much the most common to meet. The organ being enlarged, if I may so speak, the pulse is so likewise, at the same time that the beat to the finger does not convey the idea of strength, nor when we call to mind the state of the heart could we expect it. The pulse in fact is large and compressible, passing sedately as it were under the finger, and to it may be well applied the words of John Hunter, that it is action without power. When, then, such a pulse is found, we are now, I believe, justified in concluding that fatty heart exists. In saying this it is not to be supposed that we are to exclude other symptoms if present, for every point is to be seized in order

to render our diagnosis the most accurate, and the question to be solved is avowedly a very difficult one. All I would convey is this ; that in these cases, and mainly from the absence of valvular disease, other symptoms are very apt to be so obscure as to be entirely overlooked, but that the pulse and its characters are just as likely to be present, and so afford us the most valuable aid.

To enter further here into the diagnosis of fatty heart would be quite foreign to the purpose of the present paper. Neither, with two exceptions, is it my intention to speak of the causes of the disease ; but I must notice one which has year after year been gradually forcing itself on my attention till it has now reached the strongest conviction in my mind—I mean the habit of smoking, which, I believe, I have traced in many instances to have been the predisposing cause of the disease. No one is more aware than myself of the difficulties which beset a question of this sort, nor the great opposition which, for obvious reasons, it is likely to meet. Still the opinion has not been taken up hastily, nor, as I think, without such proof as the subject admits of. All will recollect that within a very few years a great paper war was carried on in the pages of the *Lancet* on the effects of tobacco, and the opinions expressed were sufficiently contradictory. Amongst them all, however, I did not observe one point noticed which seems to my mind of great importance in this question. It is the fact that if any one, no matter what his temperament may be, gets out of health, so that the powers of his system are lowered, he must then either lessen his smoking or give it up entirely. I have met no exception to this statement, which every one may test for themselves—as, for instance, in cases of paralysis, no matter how slight they may be. From the

fact, however, I conclude that tobacco, besides other effects, is a depressor of the nervous system, and that there is a constant antagonism going on between it and the healthy state of the constitution, and when used too freely it ultimately engenders a state of health which is very apt to be followed by a fatty heart. At any rate, whatever the explanation be, the fact is as stated above, and I have seen now too many cases of fatty heart, in what are called heavy smokers, to have any doubt on the matter. Though more might be said on this point I must hasten on.*

* This day, 4th March, a case which strongly confirms some of the remarks just made came under my notice, and for the third time. The patient, aged 34, is a man of full height, made in the very finest proportions, and remarkable, or at least was, for great physical strength and activity. He has always been strictly temperate as regards strong drink, but is the heaviest smoker I recollect to have met. About three months since he began, and without any cause he could discover, to lose flesh and strength very rapidly, and his wind, as he called it, became so short that he was compelled to give up active exercise. He now looked pale and depressed, having had a cold, which he found it hard to shake off. He told me he had, at my wish, twice tried active exercise since I last saw him. On the first trial he got through it but badly; on the second he was forced to give it up, as his breathing became so hurried and his heart beat so violently. It seems scarcely necessary to add that he had been driven to give up his darling tobacco.

Except the pulse, there is nothing in this case to indicate disease. The two sounds of the heart are distinct and unattended by murmur. There is no increase of dull sound on percussion, nor can I say that the impulse varies from health. Whilst he sits, however, the pulse beats but 48 in the minute, and it was just the same from the first time I saw him. It is large and full to the finger, under which it passes slowly, and is readily compressed. Any movement at once increases the beats, and more than occurs in the healthy state.

Now, in this case I have scarcely a doubt that the heart has become fatty, and most probably in the worst form. I mean where the muscle itself has degenerated. Yet, he tells me, he passed a physician, and had his life insured just five months since!

Want of proper exercise and sedentary habits, are mentioned by all writers as leading to the disease. There is one way, however, which, though very obvious when mentioned, seems to myself particularly injurious—I mean men allowing themselves to be constantly carried about in their carriages—passive exercise as it is called—which is a kind of contradiction in terms, at least it appears so to me. To what else, I would ask, can we more fairly attribute the fact which must have struck all present—I mean the way in which the leaders of our own profession have been cut off within the last few years; and what is still more remarkable, is the fact that out of six or seven of them, three actually suffered from that very rare disease—angina pectoris—and they were men in or about sixty years of age. To us, as physiologists, and therefore knowing something of the laws which regulate health, I believe the point brought under notice to be one of considerable moment, but I cannot pursue it further on the present occasion.

It was my intention to have entered at some length into the treatment of fatty heart—I mean in its earlier stages—when, I believe, it may now be very frequently, if not always, diagnosed; but time forbids. I can therefore only state in a general way that I believe the disease quite capable of being stayed, if not cured. When I spoke on this point in 1849, I gave one case in which there was every reason to suppose a weak heart existed, and in which by perseverance for some months, a cure either was or seemed to be effected. The lady lived eleven years subsequently and died of a different disease. To this case I could now, did time allow, add others, where I cannot doubt the disease has at least been stopped. In our efforts to cure it, it is not to be forgotten that, generally speaking,

there is no valvular disease to contend with, and that the mere deposit of fat cannot be looked upon as an insurmountable obstacle to cure. In fact, whilst fatty heart may in one aspect be considered as serious as any other organic disease of this viscus, it may, on the other hand, be placed as the most curable of its several affections.

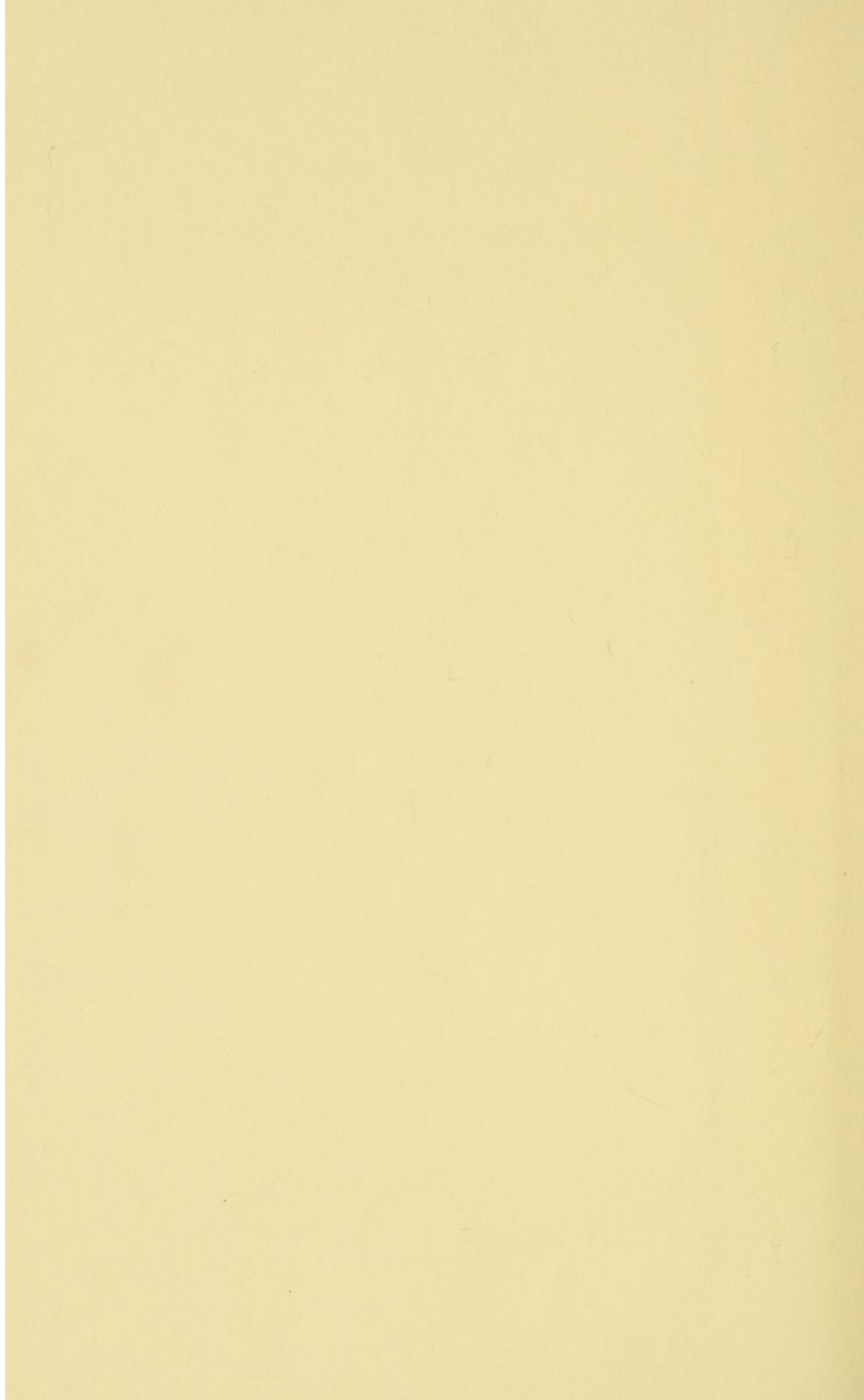
As to any specific line of treatment, I know of none. The question resolves itself into those great general principles which should guide us in our efforts to improve the general health, and must consist more in attention to what is known as hygiene than to any specific medicines whatever. A healthy state of the digestive organs and skin, a regulated quantity and quality of food, proper clothing, and above all, a well-directed system of bodily and daily exercise, are the measures we must look to. It must, indeed, be admitted that cases do occur where directions of this kind cannot, or rather will not, be followed, for many would rather take the most nauseous medicines than restrict themselves in diet or alter their habits; and that the plan is one of restriction, and demands great firmness and discretion on the part both of patient and medical adviser, admits of no doubt. Still difficulties of this kind must be overcome, and offer certainly no reasonable objection to a plan of treatment which has physiology for its basis, and the certainty of at least benefiting, if not curing, the patient.

Whilst following it, however, care must be taken that it be not pushed too fast. "*Festina lente*" is to be the rule, and time must form an important element in the treatment; otherwise the constitution of the patient—and each must of course be studied separately—may be strained too much, and serious injury follow. A very

striking, or what might better be called an exaggerated example of this, has recently occurred in the person of the celebrated Heenan, whose constitution, there can be scarcely a doubt, suffered from the treatment he was subjected to before the last prize-fight, as in the course of eleven weeks he was reduced a stone and a half in weight, very nearly two pounds a week. I cannot, however, quite agree with the writer in the *Lancet*, who, when speaking on this subject, draws a distinction between muscular and vital force. It is not easy to understand how the muscular system should be so developed and powerful, as it was admittedly in Heenan, and yet the vital force be so impaired. But enough of this, if only a caution be taken from the circumstances.

In concluding these remarks, which, from the extent of the subject, forced me to omit much, I would just repeat that my chief object has been an endeavour to advance the diagnosis of fatty heart in those cases—by much the majority—where no valvular disease exists; and that the conclusions arrived at are based directly on the study of the morbid anatomy of the organ as found in this disease.





RC
685.F3
K35
1864

