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AN ESSAY
ON
ANGINA PECTORIS,

BY JOHN HENRY M^r FARLANE,
OF PHILADELPHIA,
HONORARY MEMBER OF THE PHILADELPHIA MEDICAL
SOCIETY.

..... "How his great Heart
Beats thick!"

..... "What now avail
The strong built sinewy limbs, and well spread shoulders?"

..... Heard you that groan?
It was his last. See how the great Goliath,
Just like a child that brawl'd itself to rest,
Lies still."

BLAIR.

~~1800~~ 18001
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.....
1806.

AN
INAUGURAL DISSERTATION
FOR
THE DEGREE
OF
DOCTOR OF MEDICINE.

Submitted to the Examination

OF THE
REV. J. ANDREWS, D. D. PROVOST
(PRO TEMPORE.)

THE
TRUSTEES & MEDICAL PROFESSORS,
OF THE
UNIVERSITY OF PENNSYLVANIA,
ON THE TWENTY-FIRST DAY OF APRIL, 1806.

TO THE
REV. WILLIAM STAUGHTON, D. D.
OF PHILADELPHIA.

Dear Sir,

In prefixing your name to this imperfect Essay, I embrace the opportunity of offering you my sincere thanks, for the assiduity and attention, with which you conducted my studies, while I had the happiness of being under your direction; and of assuring you, that I retain a lasting impression, of the solicitude you have ever discovered for my progress in useful knowledge.

That you may long continue to enjoy that happiness, which you so deservedly merit, is the wish of

Your affectionate Friend,
THE AUTHOR.

TO
MATTHEW RANDALL, Esq.
OF
PHILADELPHIA.

THIS trifle is dedicated as an inadequate, though cordial tribute of respect, gratitude, and affection, by his

*Sincere Friend,
THE AUTHOR.*

TO
WILLIAM CURRIE, M. D.
OF PHILADELPHIA,

Fellow of the College of Physicians,

MEMBER OF THE
AMERICAN PHILOSOPHICAL SOCIETY, &c.

*THIS Essay is also inscribed,
as a tribute of respect and affection, by his
Affectionate Pupil,
THE AUTHOR.*

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PREFACE.

My object in the following Essay, is to give a brief view of the history, symptoms, and causes of Angina Pectoris, and, to mention those remedies that have been found most effectual, in lessening the violence of this formidable disorder.

It must be obvious to every medical character, that the subject is of great importance. Happily for mankind the disease is a rare one, but when it does occur, it proves often distressing, generally unmanageable, and almost always ultimately fatal. These considerations have induced me to attempt a concise description of those facts, which I trust will not be entirely useless, and I hope that others more capable than myself, will pursue the enquiry.

I may add, that in submitting a dissertation to the public, I am not led by choice, but impelled by necessity, and I hope that my youth and inexperience, will operate in some measure, as an apology for its numerous imperfections.

HISTORY.

It is a circumstance, no less melancholy than remarkable, that a disease, so alarming in its symptoms, and so direful in its consequences, as is Angina Pectoris, should have remained so long unnoticed by physicians, for it was not until the year 1768 that the observations of the acute and ingenious Doctor William Heberden, of London, brought to our view some of its leading characteristics.

The accurate and indefatigable Morgagni, has indeed left on record several cases which in their symptoms strongly resemble the disease in question, and he has noticed one case which is undoubtedly genuine Angina Pectoris * but to Heberden belongs the honor of first directing the attention of physicians to it.

“ Materfamilias duos et quadraginta annos nata, diu valetudinaria, diuque obnoxia vixerat, paroxysmo cuidam ad hunc modum ad se habenti. A concitatis corporis motibus, ingruerat molestus, quidam angor intra superiorem thoracis sinistram partem, cum spirandi difficultate, et sinistri brachii stupore ; quæ omnia ubi motus illi cessarent facile remittebant.

This great man struck with the peculiar nature of the disease, collected and published his first account of it in the second volume of the London Medical Transactions. Since the publication of his paper, much attention has been paid to the disease, but nothing effectual has been hitherto done for its cure.

“ Ea igitur mulier, cum rheda veheretur, lætoque esset animo, ecce tibi ille idem paroxysmus, quo correpta, et mori se aiens, ibi repente mortua est. A thorace incepta, dissectio est. In hoc pari utrinque copia nec illa exigua, effusum erat serum per se cruentum, animadversum enim fuerat nihil sanguinis in pectoris incisione illuc excidisse. Sani pulmones, nisi quod dissexi, ut postea vidimus, nimio redundabant spumoso sero. Cor potius magnum, et durum valde, ac robustum. Aorta ad curvaturam non parum dilatata; sed intus ubicunque incideres, hic illic inæqualis nec sine osseis perfectis squamulis, nidum cebri inchoatarum indiciiis.

“ In illoque ab ipsa origine, pone semilunares valvulas quæ duræ, hic illic erant et cum futuri ossis initiis, ad Iliacas usque arterias descripta vitia animadvertimus. Hinc oculos ad cor referentes, et ad cetera quæ ipsi anexa sunt, vasa nihil usquam conspeximus vitii nisi pulmonaris venæ caudex, paulo visus est æquo major.

“ In hoc et in adjecto ventriculo, sanguis erat paucus, isque ad alios omnibus in locis niger, et omnino fluidus. Sed in pulmonaris arteriæ tronco non paucus; quanquam in ventriculo dextro, ejusque auricula nullus; facile quia per venam cavam paulo ante ipsa jecur incisam defluxerat.”

Morgagni de Sed. et causis morborum Lib. II. Epis. XXVI.

It is asserted that Angina Pectoris usually attacks persons who are beyond the fiftieth year of age, but this is not universally true, as is clearly proven by the testimony of authors. Several cases are mentioned, in which the age of the patient, was considerably below that time of life ; it however generally seizes those of a robust and corpulent habit, and men are much more frequently afflicted with it than women. The following is an account of the symptoms, which characterize this complaint. The patient is suddenly seized with an intolerable sensation of stricture, uneasiness, and anxiety, which darting from the sternum to the spine, extends across the left breast, and terminates near the middle of the left arm ; sometimes the pain proceeds over each side, across both breasts, and affects the arms to the cubital flexure, and sometimes, though rarely, goes as low down as the wrists.*

The pain which I have mentioned occurs at intervals, and is usually excited by exercise particularly walking up an acivity, and that

* Heberden's Commentaries, page 365.

most frequently soon after eating. It appears to the patient as though a total extinction of the functions of life would take place, were he to persist in his exertions ; he therefore stands still and instantly the pain vanishes.

But as the disease gains ground, the paroxysms become more frequent, and violent, are excited by any unusual exertion of the mind or body, and often come on without any manifest cause. A recession of the fit does not now so easily take place ; the pulse becomes feeble, irregular, and intermitting, the countenance assumes a livid hue, profuse cold sweats break out, accompanied frequently with retchings and vomiting. The patient as though sensible of his danger sighs deeply, tears steal down his pallid cheeks, and he is often affected with a loss of voluntary motion.

At length, after having survived many similar attacks, for the space of months and years, a more violent fit puts a period to the life, of the unhappy sufferer, and he frequently expires without a struggle, or a groan.

These are the essential, and most obvious symptoms of uncomplicated Angina Pectoris: my account of them is derived from the perusal of those papers, which I have been able to collect on the subject, and from the review of one case, which came under my immediate observation.

Besides the signs already enumerated, many other phenomena present themselves, but these are to be considered, rather as accidental circumstances, than as necessary attendants on the disease. Thus Dr. Heberden mentions, that an inability to lie on the left side, sometimes occurred, and that a swelling and numbness of the arms occasionally took place;* and in the case described by Dr. Black, of Newry, Ireland, there was a particular sensation in breathing, "of which his patient by description could give no adequate idea, but which he thought resembled the sensation he would have, if the skin were off his throat, and a very cold vapour rushing down it."†

* Heberden's Commentaries, page 365.

† Memoirs Med. Soc. Lond. vol. 4. page 263.

The same gentleman observed in the same case, a dry and very distressing cough, which suddenly made its approach, and after harassing the patient for many hours, as suddenly left him.

I deem it unnecessary to pursue this part of my subject any farther, for the reasons before mentioned, and shall proceed to lay before the reader, the principal marks of organic injury, as they appear on dissection.

These are : *First*, In the heart.

A cartilaginous, indurated, or ossified state of the coronary arteries. (*a*)

Preternatural hardness of the heart. (*b*)

Uncommon fatness of the heart. (*c*)

An unusual flaccidity, paleness, and diminished size of the heart. (*d*)

Secondly. In the large blood-vessels :

(*a*) Parry on Syncope Ang. page 12. 24, 33. Memoirs Med. Soc. Lond. &c. &c. &c.

(*b*) Morgagni de causis et Sedib. Morb. Lib. II. Epis. xxvi,

(*c*) Memoirs Med. Soc. Lond. vol. IV. page 265.

An indurated and ossified state of the tricuspid, mitral, and semilunar valves. (*e*)

Induration and ossification of the Aorta at its curvature. (*f*)

Some, or all of the above mentioned morbid appearances, are found to exist in the bodies of those who die of Angina Pectoris. It is certain, that many other signs of disease are, often present, but I conceive it unnecessary to notice them.

Thirty years have scarcely elapsed, since Angina Pectoris was first particularly noticed by physicians ; it cannot therefore be supposed, that much progress should have been made in ascertaining its causes or mode of cure ; indeed, it is universally admitted, that the pathological investigation of this subject is involved "in clouds and darkness." I cannot hope therefore to advance any thing new, or greatly interesting on a point, which has eluded the researches of the most enlighten-

(*d*) Parry, page 32. Home, page 63. Med. Memoirs vol. i. page 380. do. iv. page 269.

(*e*) Parry, page 23. 32. Morgagni, &c. &c.

(*f*) Parry, *ibid.* Morgagni Lib. II.

ed physicians. I am only to give a concise account of what has been said on the disease.

I have before remarked, that this disease is generally excited by walking up steep places ; but, in addition to this, it will be necessary to observe, that any violent exercise of the mind or body, may, and often does act as powerful exciting causes.

It is not difficult to account for the manner, in which these agents operate, in producing the paroxysms of Angina Pectoris. By their stimulus they increase the force of the circulation, and the heart rendered feeble by organic injury, is not able to propel the blood, with due force; but how the organic injury is produced, remains to be discovered.

TREATMENT.

Having thus briefly mentioned the symptoms and causes of Angina Pectoris, it remains for me to consider the treatment. In entering upon this part of my subject, it is painful for me to observe, that very little success in its cure, has as yet been attained. In vain have been the observations, of the most eminent Physicians, in vain the inferences drawn from dissection, and in vain the administration of those remedies, which theoretical hypothesis may have suggested for its cure. In spite of all endeavours, the disease still remains one of the *opprobria* of medicine; controversies are already agitated concerning the nature of the complaint; while some eminent in their profession, declare it to be the offspring of gout, others of equal respectability, assert the contrary. It would be equally foreign to my purpose, or inclination,

to enter into a discussion of this question. Happily for mankind, it does not involve any point, of great practical importance ; since the theory of the Unity of Disease has been established and propagated by the Illustrious Rush.

The indications of the Treatment, are two-fold, viz.

First, To relieve or remove the paroxysm.

Secondly, To prevent its recurrence.

The former is to be attempted.

1st. *By Blood-letting*. With a view of lessening the sufferings of the patient, blood-letting has been highly recommended by Drs. Percival, Wall, Parry, and others.

Indeed when we consider that in this disease, the heart is incapable of performing the duties assigned to it, and that undoubtedly from being suscharged with blood, it would appear that this remedy, is not only useful, but absolutely necessary especially in habits robust and corpulent, and in such as I have

observed, the disease most frequently occurs.*

Blood-letting is not contraindicated by the feeble pulse, which occurs in a paroxysm of Angina Pectoris, as it is a fact that the action of the sanguiferous system is rendered fuller and more equable by the abstraction of blood in all cases of over distention. The quantity drawn should be accommodated to existing circumstances.

2ndly. *By Cathartics.* There is no doubt but that purgatives will be of advantage during the fit, more especially when we have reason to suspect an accumulation of fæces in the alimentary canal, which by inducing irritation, not only tends to aggravate the sufferings of the patient during the paroxysm, but may also often prove an exciting cause of the disease.

Those purgatives that are speedy in their operation, are unquestionably best cal-

* To this it may be added that it occurs much more frequently in men than in women, and that for reasons too obvious to need mentioning.

culated for the removal of such offending agents, for example, Scammony, Gamboge, Jalap, &c. &c.

Their action should be accelerated and assisted by the frequent administration of enemata.

3rd. *By Cordials and Carminatives.* These may be administered, in small and repeated doses, with a view to remove flatulency, but their use should be confined to that alone, as by their stimulus they evidently tend to encrease the symptoms of the complaint.

4thly. *By Frictions, Rubefacients, and the application of heat, to the extremities.* The use of these appears much less objectionable. They by gently stimulating distant parts, may do good, by preventing the accumulation of blood near the heart, and will likewise have the effect of removing the death like coldness, which invades the extremities.

Concerning the use of *emetics*, I will only observe, that notwithstanding what Doctor Percival, has said in their favor, their ex-

hibition appears to be improper. But to decide hastily is wrong: let future experience determine their value.

The second Indication, may perhaps be accomplished.

First, By a strict attention to diet, which should be as little stimulating, and nutritious as the nature of the case will allow.

A diet consisting wholly of vegetables, has been recommended, and animal food interdicted; but when we take into consideration the tendency such articles have to produce flatulency, we must admit that the occasional use of meats easy of digestion, would not be improper.

Secondly, By abstinence from ardent liquors.

Wine indeed may be given with a view of supporting the strength of the patient, but the quantity ought never to be so large, as to produce much excitement of the sanguiferous system.

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