discrimination of diseased structure, whilst another denies its utility at all, and designates it as an ocular deception. One relies with absolute trust on mercurial preparations in the treatment of lues, and another would deem himself guilty of slow poisoning by its administration under any circumstances. It would be amusing if it were not so serious a matter, to watch the inconsistencies into which unphilosophical habits of thought lead those who are their victims. The truth is, that you must open your minds to receive aid in the diagnosis and treatment of disease from every quarter; and, gentlemen, you will often find in spite of a careful study of the history and of the symptoms of disease, and in spite of percussion, auscultation, and the microscope, you will be unable to come to a satisfactory diagnosis; or having made out the nature of the malady, you will exhaust the resources of the Pharmacopœia, and try every rational and empirical mode of treatment in vain.

I have given you but a slight sketch of what I proposed to myself when I commenced the second portion of my address, but the time bids me to hasten to a conclusion.

Before parting I would, however, say a few words, which refer rather to the moral than to the intellectual aspects of our profession. You are about to become connected with a large body of gentlemen, whose services are of the utmost importance to the welfare of society, but whose corporate influence, owing to disunion amongst the individuals belonging to it, is far less than is necessary for its own interests and for those of the public. A defective general disorganization, the result of an incomprehensible neglect on the part of our great medical corporations, is doubtless the main cause of this state of things. Much may be effected to remedy the evil by each, in his individual capacity, doing all in his power to promote good feeling and unity of action amongst us, on all matters relating to our public and private duties. And for this, amongst other reasons, I would name the importance of your cultivating the *esprit de corps* from the moment you commence your medical studies. Louis, the great French physician, once observed to me, on refusing a fee tendered to him for attending upon a medical student and friend, who died in Paris, "that medical men throughout the world are brothers." As brothers then, we have all the same interests, and ought to have the same sympathies. "*Idem velle atque idem nolle ea demum vera amicitia est.*" Circumstances necessarily render us frequently in need of the help of each other; and this help can never be either given or received with advantage to our patients, unless the most perfect reliance on the good feelings and honourable motives of the members of our body obtains amongst us. Not only, however, do our common interests demand brotherly union, but, gentlemen, many of the happiest moments that our medical life knows, are those which we pass in the generous and unreserved confidence of friendly intercourse.

And in furtherance of this feeling it is of importance to you early to obtain correct views with regard to medical ethics and medical etiquette. Even as students they will be occasionally needed to direct your conduct

towards your teachers and towards each other. I am aware that some very respectable individuals amongst us, from motives which perhaps it would be difficult to analyze, undervalue the present importance of this subject. We may, however, rest satisfied, if gentlemen of the solid acquirements, polished mind, unblemished character, and profound experience of the late Dr. Perceval, and of the scholastic learning, well-known seriousness, and high repute of Dr. Greenhill, of Oxford, can see the necessity of a code of medical ethics, that it must be of importance that one should be generally recognized. Human interests and human weaknesses in medical, as in general affairs, are so powerful in causing errors of conduct, that we cannot have too many public checks imposed for the preservation of public morals. It is true that a dishonourable mind can never be made honourable by any external regulations, but the weak and wavering may be curbed from evil, or strengthened in the path of duty by such, and the just and good have their hands strengthened in their honest course by having some great standard of right to which they can appeal.

Finally, gentleman, let me advise you to enter upon your studies with the determination to achieve excellence in your profession. Self denial, perseverance, and industry are the great pre-requisites for attaining this end, and if you will but exercise those qualities your success is certain. Remember, however, that mere intellectual attainments will fail in securing the approval of your own hearts, of your medical brethren, and of the public, unless you conjoin with them gentlemanly habits and feelings, and the strictest moral rectitude.

CASE OF DISEASED HEART.

By CHARLES COWAN, M.D., READING.

Read before the Reading Pathological Society.

GENTLEMEN,—Having long been disinfected of the *cacoethes scribendi*, and having often wished that many others had fallen into a similar condition, (believing that among the legion of abuses incident to our morbidly active age, is the unlimited expenditure of pen, ink, and paper, and the consequent double robbery of the writer's and the reader's time,) I should not now have roused up from my scriptorial collapse, did I not think that the following case presents features of obscurity and comparative novelty, which may render it somewhat interesting to my associates. For the previous history and the *post-mortem* appearances, I am indebted to the zeal of my intelligent and experienced friend Mr. Bellis, of Maidenhead, who, though he devoted three hours to the purpose, much regrets that he had neither time nor opportunity for a more detailed examination. I have also the advantage of appending the able analytical diagnosis of Dr. Charles Williams, whose careful inspection of those portions of the heart which could be removed, has greatly added to the completeness and interest of the case.

CASE.—Mrs. C., aged 50, short, and inclined to corpulency, of active mental and bodily habits, was considered by herself and her friends to have enjoyed uninterruptedly good health, with the exception of an attack of rheumatism fourteen years previously, and a second seven years afterwards, when her medical attendant thought the heart was affected. For some months prior to her last illness, her obesity had increased, and to this she attributed her inability to stoop and work in the garden with the same ease as formerly, but her walking powers and general activity were unimpaired. She was first seen by Mr. Bellis on the 20th of July, 1850, who found her complaining of tightness of the chest, extending from the epigastrium half way up the sternum, with flatulence, acidity, and general feeling of discomfort. Pulse 75, intermitting every twenty-fifth beat. Had never suffered from palpitation or any other uncomfortable sensation about the heart.

21st.—After taking a warm laxative draught she was much better, and the next day went to visit some friends at a distance of six or seven miles, who for the first time remarked her altered appearance, having previously spoken of her as the best life in the family.

23rd.—She sent to Mr. Bellis for a blue pill and draught, “feeling poorly and bilious,” and when seen in the evening, stated that soon after breakfast she was suddenly seized with a peculiarly distressing but indescribable sensation about the heart, accompanied by fluttering and faintness. Pulse exceedingly quick, feeble, and irregular. Breathing much distressed, and vomiting bilious matter.

24th.—In the same state.

25th.—General symptoms as before, with the addition of the absence of pulse in the right wrist. During the previous night, supposed rheumatic pains and some tingling sensations were complained of in the right arm.

26th.—No alteration.

27th.—I saw her in consultation with Mr. Bellis, and found entire absence of arterial action from the right subclavian downwards; some coldness and numbness in the arm, but without tenderness, venous fulness, swelling, or lividity. The action of the left radial and both carotids was rapid, irregular, and fluttering; and the heart presented similar features, with an obscure and diffused tendency to bellows murmur, but insufficient to assert its existence. Percussion of the cardiac region was duller over a larger space than normal, while over the lungs it was natural, the expansion of the chest unimpeded, and the respiratory murmur everywhere distinct. The patient was cheerful; intelligence unclouded; breathing quiet; skin cool; could lie in any position; did not feel faint; no lividity, and the venous system in the face and neck was rather below the average fulness; tongue clean; appetite returning; occasional nausea; urine free; abdomen natural.

28th.—Her condition did not vary.

29th.—At my second and last visit, I found no material alteration, except a more anxious countenance, the breathing unconsciously irregular and unequal, and some sub-crepitus at the base of both lungs. Mr.

Bellis also mentioned that he was unable to detect pulsation in the *left tibial artery*, and that the limb was rather colder than the right. At our united request Dr. Williams saw her late the same day.

31st.—She complained of most excruciating pain in the left leg, from the foot to the knee, which continued till the morning of the 2nd of August, when she died from gradually increasing pulmonary congestion; no appearance of gangrene or oedema in either extremity; slight lividity of the left leg a few hours before death. The treatment consisted of counter-irritation, diffusible stimulants, and nourishment.

With regard to *diagnosis*, the only practical judgment I could clearly form was, that the immediate source of embarrassment, whatever the cause, was the formation of coagula in one or more cavities of the heart, and that the arteries were obstructed from a similar condition.

Combining the previous history of the case, its rapid supervention and development, with the absence of all symptoms of arteritis, dissecting aneurism, tumour, or any other discoverable form of cardiac or pulmonary disease, I was inclined to refer the attack to some inexplicable but sudden modification of the crisis of the blood. This idea, though full of difficulty, was much strengthened by the coexistence of arterial obstruction, under circumstances that I had never met in connection with heart disease, and which I could not otherwise explain. The diagnosis was of course most unfavourable.

Dr. Williams, fully feeling the peculiarity and difficulty of the case, inclined to the opinion that sudden rupture of the mitral valve had taken place, or that there was fatty degeneration of the heart. The arterial condition was attributed to coagulum from enfeebled cardiac action. The objections to such a solution were clearly the previous good health of the patient, the absence of any evident disturbing cause, and the fact of arterial obstruction not being an ordinary attendant upon any kind or degree of cardiac imperfection.

Post-mortem.—External appearance, (says Mr. Bellis,) that of a stout healthy person, with a considerable quantity of fat; heart large, soft, flabby, and pale; left auricle nearly filled with a firm coagulum; in the left ventricle there were only a few fibrinous shreds, and in the right cavities not more than what is usually found; lungs extensively congested; blood in the *venæ cavæ* black and fluid. The right subclavian and left femoral arteries, for some inches, as far as they were examined, were plugged with a remarkably dense coagulum, as if injected, adherent to the inner membrane, but without any trace of lymph or other produce of local secretion. The lining membrane of the former was opaque, and somewhat roughened by small yellow patches of atheromatous deposit, and the femoral presented slight traces of similar changes. “The edges,” says Dr. Williams, “of the anterior and posterior laminae of the mitral valve, were adherent to each other, so as to form a short conical tube, almost amounting to the button-hole contraction. This, together with the rigidity, must have caused considerable obstruction to the play of the valves, and the form of

the orifice clearly proves to me that considerable regurgitation habitually occurred. The aortic valves were also partially rigid, but may have been competent to close the orifice. The muscular tissue, in addition to its general flabby appearance and feel, shows under the microscope fatty degeneration of the muscular fibres in all the parts tried. My friend, Dr. Quain, carefully observed this, and I confirmed it with my own microscope. One of the coronary arteries was dilated at its orifice, and then much narrowed by a rapid ring of cartilaginous matter; further on the calibre was natural. The venous sinus, receiving the veins of the heart, and terminating in the right auricle, was remarkably dilated to three or four times its natural size."

From the results of the whole history of the case, Dr. Williams arrives at the following ingenious and very plausible conclusion:—"The structural disease of the heart, comprising its vascular obstruction and consequent textural degeneration and its valvular lesion, existed anteriorly to the recent illness, but carried no further disturbance of function than the increasing shortness of breath, of which the patient had complained for some months, and the change in appearance which attracted the notice of her friends. The disease for which Mr. Bellis first attended her, appears to have been primarily a derangement of the biliary and intestinal secretions, but the disturbance connected with it seems to have put the diseased heart and arteries to a trial, and suddenly discovered their imperfections. The pulse, at Mr. Bellis's first visit, denoted the commencement of the failure of the heart's action, when there is no evidence of the arterial branches having been at all obstructed; this obstruction afterwards supervened, as the combined result of the enfeebled power of the heart, and the rough diseased state of the lining membrane of the affected arteries, promoting the coagulation of blood within them, and ultimately their obliteration. The action of the heart still continued gradually to fail, the pulse in the pervious arteries remaining feeble, and very irregular, (which would not have been the case if the failing power had begun in the arteries, the obstruction would rather have irritated and excited the heart's action,) until ultimately it failed altogether. I have met with several cases bearing close analogy to the present, although I cannot recal any one precisely similar. The following most nearly approaches to it, and suggested to me one out of the two explanations which I made to Mr. Bellis:—"

"A man, of 50 years of age, was admitted to the hospital for some temporary ailment, having at the same time signs of valvular disease of the heart, but not such as to incapacitate him from work. While at the water closet, where he had walked, he was seized with faintness and numbness of one leg, and it was with much difficulty that he could be got back into bed. The numbness increased, and it was found that there was no pulse in the arteries of the affected limb, which subsequently swelled, became livid, and a large gangrenous patch was formed on the leg, the pulse became increasingly feeble and irregular, and he died four or five days from the commencement of the numb-

ness. The arteries of the limb were found much diseased, and plugged with a firm coagulum; the descending aorta was also partially atheromatous and dilated. The heart was moderately dilated in all its cavities, with some thickening of the walls, which were flabby. The colour was not noticed, as I was not then familiar with fatty degeneration. The mitral valve was thickened, corrugated, and one of the principal cords had been ruptured, apparently recently, as its broken ends were fringed with fibrinous matter."

While coinciding to a great extent in the general soundness of the reasoning adopted by Dr. Williams, I cannot help feeling that many difficulties are unexplained, and that the case remains surrounded by much that is obscure and peculiar. The *post-mortem* appearances are chiefly interesting, as demonstrating cardiac lesions of considerable importance and chronicity, not indicated by the previous history and actual health of the patient, though immediately influential in the fatal result. The valvular changes had no doubt their origin in the last rheumatic attack, seven years previously, while the fatty degeneration, in addition to the influence of sex, age, and general obesity, was probably connected with the long obstructed condition of the coronary circulation. The influence of the latter, as a cause of functional or textural difficulty, we think, with Dr. Bellingham, has not been sufficiently estimated.

The absence of all conscious inconvenience, beyond slight dyspnoea, when stooping, the last few months, the undisturbed health and unimpeded activity, prove, that, up to the period of her last illness the heart was equal to its ordinary duties, and that the general current was not obstructed. With such functional regularity we cannot suppose that mitral regurgitation "habitually occurred," nor that more than very partial fatty degeneration could possibly have taken place. Microscopical observations, however skillfully conducted, justify very cautious reception, and it is clear that the comparative amount of textural change in the heart generally could not have been so determined in the instance before us, very small portions only having been examined.

The atheromatized condition of the subclavian, and still more of the femoral arteries, presents no adequate explanation of their sudden obliteration, however aided by a feebly-propelling organ. Indeed, we cannot attribute it to any kind or degree of mere cardiac or vascular disability, nor have we even met with such a result in connection either with valvular disease, or a simply atheromatized condition of the vessels. The cases reported by Mr. Turner, in the third volume of the "Transactions of the Medico-Chirurgical Society of Edinburgh," including, we think, the one now appended by Dr. Williams, are instances of rupture or laceration of the internal coat, and therefore not bearing upon the condition now discussing. Neither are we justified, from the symptoms or *post-mortem* appearances, in supposing inflammation to have been the cause; and the hypothesis of some sudden modification of the blood, at first suggested to the mind, we equally relinquish as improbable and untenable.

The only solution of the difficulty we can suggest, which does not infringe upon ordinary probability, is, that in the peculiar condition of the cardiac circulation, the digestive disturbance which ushered in the attack caused a small amount of coagulation in the left auricle, which by accidentally obstructing the mitral orifice, was the immediate cause of the sudden distress experienced in the cardiac region. By the consequent effort of the system it was displaced, but not ejected, while it rapidly increased in bulk, retarding, of course, the blood through the lungs and heart, and fully accounting for the feebleness and irregularity of the pulse. Small detached portions of coagulum, we believe, subsequently to have escaped from the cardiac cavities, and to have been accidentally entangled in the obstructed vessels.

The local circulation being thus suddenly arrested, coagulation rapidly followed, and the solidified blood, acting like a foreign body, became quickly adherent to the inner membrane. The great firmness and adhesion of the clot is explicable by the unimpaired power of the patient; and to the interruption of supply to the affected limbs, beyond what was furnished by a very feeble collateral circulation, combined with the freedom of the nervous system, and the unexhausted vitality, we may ascribe the absence of cedema, and the little tendency to decomposition.

In this way, we think, all the symptoms may receive a rational elucidation, though such a combination of circumstances must ever be exceedingly rare, and we have not succeeded in finding a single instance strictly similar to the one we have now very imperfectly detailed.

Whatever the previous history, it would be consistent under approximative circumstances, to diagnose the presence of pre-existent cardiac disease, and that chiefly localised in the left auricle and mitral orifice.

With regard to the treatment, it might, perhaps, be prudent to try the effect of small and repeated venesections, with the object of diminishing the volume and crasis of the blood, and lessening the amount of visceral congestion. The use of salines, as liquefiers of the blood, is also a rational though very unpromising therapeutical indication, as such conditions, when once established, are almost, if not absolutely, hopeless.

We need scarcely remark, in conclusion, that the above case is not to be confounded with those examples of cardiac and vascular coagulation to which attention has been recently directed, chiefly limited to the right cavities and veins, occurring at the close of chronic diseases, attended with cachexy, emaciation, extreme debility, or accompanied with any considerable obstacle to the general circulation. In our own experience, what we have now recorded stands alone, but we cannot doubt that others may have encountered more or less analogous instances.

Reading, October 23, 1850.

RHEUMATISM OF THE DIAPHRAGM.

By A MEMBER.

In severe and alarming cases of acute rheumatism, when metastasis is said to have taken place, and the heart or thoracic viscera are said to be affected organically, it will often be found that the threatening symptoms are entirely dependent upon the rheumatic condition of this musculo-tendinous partition. Little is said in text-books which would impress the minds of young practitioners with the importance of discriminating cases of this kind, apart from supposed organic diseases of the heart and lungs. When the texture of the diaphragm is borne in mind, its connexion and proximity to the muscles of the loins;—when, too, we witness how often the tendinous expansion of these muscles (*quadratus lumborum*) is the seat of rheumatic pain, stiffness, and spasmodic action, need we be surprised at what takes place in cases of diaphragmatic rheumatism. Here you may have at one time sudden and unexpected vomiting, probably from impaired function of the pneumogastric nerves. Suddenly, too, the pulse may become intermittent, and almost imperceptible, the symptoms of collapse invade, the aperture for the vena cava is constricted, the blood cannot return to the right side of the heart, and the lungs are wanting in their natural supply and action, hence the morbid sounds are present. Again, the aortic opening may suffer from the same cause; the blood which should be propelled through the system cannot pass, there is engorgement of the left side of the heart, the countenance is suffused, the respiration laborious, and there is a bounding pulse.

That, in violent and protracted cases the heart may become hypertrophied, is not to be doubted; that the right ventricle and its corresponding auricle may, too, become dilated, and the substance of the ventricle much attenuated, is an unquestionable fact. In cases of rheumatism, where the condition of affairs is such as here attempted to be shown, how mistaken would be the practice of depletion. Supposing, in the hurry or alarm of the attack, recourse be had to bleeding;—that the full, bounding pulse, laborious respiration, &c., would seem to indicate the use of the lancet;—that the blood may be bled and cupped; are these signs a warranty for the repetition? You may bleed and bleed until you have killed the heart itself, before you can stop the buffy appearance, viz., the deposition of fibrin of the venous blood in illnesses of this kind. You may, and often have, during the violence of the attack, and after it has given way, crepitant or sibilant rhonchus, or cægophony. You may have violent action of the heart, with loud and irregular ventricular sounds; these often—very often, subside, and the patient returns to a state of health, after he has been said repeatedly to have diseased heart, hydrops pericardii, and diseased lungs.

It is not here intended to speak of the many remedies usually had recourse to in this disease. The *habeat hæc, persistet in hoc, or repellantur haustus bolusque*, are not in these, our days, the means by which