with their sequelæ. According to the theory which I have favoured, each one of the series may be looked upon as being made up of a number of what, regarded from one point of view are symptoms, regarded from another point of view are component parts of secondary diseases, issuing in collateral lines of descent from a common ancestral cause. Thus in the first example, that of scarlet fever, we have skin-disease, tonsil-disease, kidney-disease, each immediately traceable to the operation of the scarlatinal contagion; and as a later series of events, we have desquamation of the skin and falling out of the hair, destructive inflammation of the tympanum or obstruction of the rima glottidis, uræmic and epileptiform convulsions; and as a later series still, pyæmia, rheumatism, heart-disease, chorea, and other morbid conditions needless to enumerate. But what limits shall we assign to scarlet fever itself? At what point among all these successive morbid processes does the disease scarlet fever cease? Which amongst all the phenomena are constituent parts of scarlet fever? Whether it is material to give a definite answer to this question, I am by no means clear; indeed, I am not quite certain that an answer in all respects satisfactory can be given. But let us test the question by reference to the comparatively simple incidents of some common parasitic disease—say itch. The presence of the acarus causes a special kind of eruption and certain subjective symptoms, which collectively constitute the disease; but the irritation which itch induces is apt to bring on other forms of skin-diseases, such as urticaria, eczema, impetigo—affections which may complicate the primary diseases during its presence, and may persist long after that has been cured. Now I presume that urticaria, eczema, and impetigo, at all events when they commence (or even when having commenced previously they persist) after the massacre of the acari and adding of their eggs, can scarcely be looked upon as itch. If they should persist for twelve months, after that epoch they would certainly not be regarded as scabies, and obviously, therefore, they are no more scabies when they have only survived for a period of five minutes. Now if this mode of regarding the question be true of itch, it is obviously equally true when applied to the analytical investigation of the phenomena which attend and follow scarlet fever; and hence only those morbid conditions should be regarded as constituting a part of that fever which spring directly from the operation of its contagium; and none of those which survive the death or disappearance of the contagium, save only such as, having originated under its influence, subside continuously from the time of its dissolution. No doubt there would be a practical difficulty (in many cases, indeed, impossibility) in determining the exact period at which the primary cause of a disease ceased to operate directly; and it may be admitted that in most cases it would be of little practical importance to come to a determination on the point; but nevertheless it does not seem to me that such objections at all invalidate the essential truth of the above proposition. Thus the eruption, the throat-affection, and the renal congestion, and certain associated conditions, form an essential part of scarlet fever; but not so destruction of the ear, or hæmorrhage from the carotid or its branches, or laryngitis, or epileptiform convulsions; and still less so pyæmia, rheumatism, heart-disease, and other more remote consequences. And so equally various of the incidents which have been grouped under my cases of pelvic cancer, syphilis, and alcoholism, may be eliminated from our conception of them as definite diseases.

In conclusion to this part of my subject, I may be permitted to remark that there is nothing in any of the above arguments which, fairly considered, or perhaps rather considered from my point of view, would lead me to modify the definition of disease which has been given; namely, that "it is a complex of some deleterious agency acting upon the body, and of the phenomena (actual or potential) due to the operation of that agency"; and that this definition is equally applicable to diseases in the more comprehensive sense of the word, and to the various incidents, complications, and sequelæ of such diseases taken separately.

[To be continued.]

THE MEDICAL ACTS.

IN reply to Dr. Lush, Mr. Bruce has stated this week in the House of Commons, that, after consulting with the Lord President of the Privy Council, they were jointly of opinion that, inasmuch as the English Universities and corporate licensing bodies were uniting to frame a joint examining board, and as it was stated that there was a great probability that the Scotch and Irish examining bodies would adopt the same course, the Government would await the result of their deliberations this year, before introducing a Bill to further amend the Medical Act. Meantime, however, the imperfections of the fortieth clause and of the constitution of the Council remain as flagrant as ever.

CLINICAL OBSERVATIONS

IN

THE GLASGOW ROYAL INFIRMARY.

By W. T. GAIRDNER, M.D.,

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Cardiac, Renal, and Pulmonary Symptoms.—A Murmur, recognised as Aortic Regurgitant, disappearing after ten days.—Perplexed Diagnosis.—Pericardial Friction appearing before Death.—Post Mortem Examination.—Remarks.

IN the following case, which was repeatedly the subject of clinical remarks by Dr. Gairdner, the combination of cardiac, pulmonary, and renal disease, the presence both of endocardial and exocardial murmurs, and the curiously complicated web of symptoms resulting from these organic lesions, gave a peculiar interest to the diagnosis, which was, in fact, exceedingly perplexed, and therefore instructive even when in error, as it was in some important particulars. Dr. Gairdner pointed out that errors might be based upon a well-considered judgment of facts, just as correct opinions might sometimes be formed upon imperfect, or even erroneous, observations. The present case affords examples of both kinds of fallacy, and both are equally instructive.

J. D., aged 35, a hairdresser, was admitted to the Glasgow Royal Infirmary on January 8th, 1872. The description of his symptoms, which was recorded in presence of the clinical class on the 15th January, was in many points that of a case of spasmodic asthma, with nocturnal exacerbations, attended by wheezing and coughing, marked orthopnea, and expectoration of frothy mucus, leading on to the end of the paroxysm. Notwithstanding a certain amount of dulness on percussion at both bases, the state of the respiratory murmur gave no sufficient indication of the cause of the distress; the urine was albuminous, of specific gravity 1010-1012, acid, pale yellow, with hyaline tube-casts, and a few blood-corpuscles. There was a moderate amount of dropsy of the limbs, and the complexion bore strong traces of the anæmia of renal disease. The physical examination of the heart led to no very clear inference as to its condition—a rumbling prolongation of the first sound, which could not be definitely pronounced either exocardial or endocardial, being the leading fact observed; while the symptoms were, in Dr. Gairdner's opinion, open to the interpretation of being, at least in part, of cardiac origin, yet without the possibility of excluding other factors from an important, perhaps a primary, share in their production. It was particularly observed that there was no specially cardiac type of pain—indeed, little characteristic pain, properly so called, of any kind; but, on the other hand, the very strikingly marked thoracic oppression and orthopnea gave to the obviously imperfect descriptions by the patient somewhat of the tone of that peculiar and indescribable suffering which Dr. Gairdner is in the habit of calling *angina sine dolore*, from its association with the most terrible aspect of the true *angina pectoris*; viz., the dread of instant death. The observations made afterwards, as well as the statements of J. D.'s brother-in-law, as to his condition for nearly a year before admission, left no reasonable doubt as to the substantial accuracy of the diagnosis as at first formulated by Dr. Gairdner in these terms: *Asthma nervosum (Qu. anginosum?) cum hydropse. Vitium cordis sine dolore aut palpitazione. Albuminuria.*

But what was the "vitium cordis?" Pericarditis had been suspected, but a careful observation of the percussion-dulness and sounds of the heart failed to give evidence of any such considerable effusion or roughening of the membrane as to form an adequate basis for that diagnosis. Subsequent observations, the result of which was noted in the Ward Journal on 20th January, gave a new importance to the cardiac aspect of the diagnosis by the discovery of a double murmur—ventricular systolic and diastolic in rhythm—audible with varying distinctness along the sternum, especially at its lower third, and also over the second right costal cartilage. At the same time the pulse was observed, both sphygmographically and to the finger, to have in a not inconsiderable degree the well-known characters of the pulse of unfilled arteries, though not, perhaps, absolutely characteristic.

These physical signs were pointed out to the class as determining the diagnosis in the direction of cardiac disease—viz., aortic obstruction and insufficiency—an ample cause, in all probability, for all the other symptoms, especially when reinforced by renal disease and dropsy. But no sooner did this diagnosis appear to have been realised with sufficient

accuracy (the murmurs being often difficult to demonstrate as clearly as was desirable), than, on a subsequent observation, noted under date January 30th, it was found that the presumed murmur of aortic regurgitation had entirely disappeared, leaving only the apex-prolongation of the first sound, as formerly described. Nor was this change (verified as it was by numerous observers) owing in any degree to indistinctness of the cardiac sounds, which continued, as formerly, audible all along the sternum with peculiar distinctness, flapping in character, and evidently quite superficial. There was, accordingly, still no considerable evidence of pericardial effusion; and, although the sufferings of the patient were obviously increasing, and the pulse still of the peculiar character above indicated, it was impossible not to hesitate once more as to the diagnosis.

On February 6th, it was observed that while the diastolic murmur was still absolutely inaudible, the systolic was once more distinctly blowing in character; while a moderate but well-defined increase of the cardiac dulness, and a slight muffling of the cardiac sounds as compared with previous observations, supported the idea of a possible pericardial effusion. It became, therefore, necessary to reconsider the question of aortic disease; and at this stage Dr. Gairdner pointed out to the class the possibility of an acoustic fallacy—viz., the mistake of a friction for a blowing murmur—indicating that, as respects the diastolic murmur at least, his judgment, as formerly expressed, was considerably unsettled by the fact of its complete disappearance. It was, in Dr. Gairdner's opinion, at least as probable that the mistake should have been made of an exocardial for an endocardial murmur, as that an aortic regurgitant murmur should appear and disappear within a period of ten days; and this without any such obscuration of the heart's sounds and of the pulse as to lead to the probable inference of a mechanically choked ventricle, and consequent disturbance of the circulation.

Finally, on the 8th February, about thirteen hours before the patient's death, and only two days after the previous remarks had been made, an "exceedingly loud and superficial churning double friction" became audible over the right ventricle, and with a less superficial quality over the whole præcordial region, without any great muffling of the cardiac sounds, and without appreciable increase of the cardiac dulness on percussion. It seemed therefore now quite clear that pericarditis was at last present, and under the influence of this conclusive observation Dr. Gairdner renewed his statement of suspicion that the former impression as to a blowing diastolic murmur was probably fallacious. He referred to the case of Christina M. (in his *Clinical Medicine*, p. 621), and also to the case of A. T. (Memoir on Pericarditis, *Edinburgh Medical Journal*, April, 1859), as instructive and probably conclusive examples of friction murmurs mistaken for endocardial, and stated that with these and other like facts before him he felt it impossible to guarantee the diagnosis in the present instance; especially as the majority of the symptoms could be explained equally well on the hypothesis of either endocardial or exocardial disease; the latter being, of course, secondary to the renal affection, which might, in the absence of endocardial disease, be perhaps considered as the starting-point of the whole organic mischief.

The *post mortem* examination, performed by Dr. Joseph Coats on the 10th February, gave conclusive evidence that the first diagnosis was correct; and that the pericarditis, which in the end attracted so much attention as to unsettle the previously formed opinion as to the existence of aortic disease, was, in fact, a very late incident, almost a phenomenon of the agony. It was observed that the præcordial dulness, as marked out on the dead body, considerably exceeded the dimensions assigned to it during life. This was, however, not owing to pericardial effusion; but rather, probably, to retraction of the border of the lungs (especially the right lung), and the increased distension of the heart itself with blood, during the last hours of life. Only a few ounces of fluid, having the barest trace of turbidity, were found in the pericardium, the whole surface of which, however, was lined with a thin veil of soft and semi-transparent fibrinous deposit, exactly corresponding, in character and apparent date, with the well-marked and widely-diffused friction-sound heard within the last few days of life. The heart was large, weighing 17½ ounces; the enlargement being chiefly of the left ventricle. The aortic valves presented very well-marked, and even extreme, disease; notwithstanding which, their actual mechanical competency, as tested by water before laying open the orifices, was not very greatly disturbed, the water leaking through them, but with a slowness not a little surprising, considering the state of the parts. The left fold of the sigmoid valves was converted into a prominent rough mass by vegetations, and at one point perforation of the valve had occurred. The posterior fold had all the appearance as if a small aneurism of the valve had existed, and had ruptured towards the ventricle. The anterior fold was somewhat thickened, and had coalesced to some extent at its root with the left fold. Seeing that such a mass of disease was actually found to co-

exist with a certain degree of competency of the valve after death, while during life the evidences of incompetency had been present, and afterwards had disappeared, Dr. Gairdner thought the question might fairly be raised if the deposit of recent vegetations might not be supposed to have had the effect of partially intercepting the regurgitation present at the earlier period, and so contributing to the disappearance of the corresponding murmur. At all events, the facts as displayed at the *post mortem* examination, left no reasonable doubt that a murmur of aortic regurgitation had in this case become apparent to a certain number of practised ears; and then, after an interval of less than a fortnight, had vanished again, leaving only a systolic murmur of varying intensity, and somewhat equivocal character.

The rest of the facts revealed at the *post mortem* examination were comparatively unimportant from the diagnostic point of view. The mitral valve and its chordæ tendinæ were somewhat thickened, but the orifice was not diseased. The lungs were highly œdematous. The kidneys were enlarged, and presented the second stage of granular degeneration of the cortical substance, with infiltration and obviously fatty deposit in the tubules; the bases of the pyramids being obscured, and the cortical substance generally pale and irregularly opaque.

In speaking of this case after the whole of the facts had been disclosed by the examination after death, Dr. Gairdner remarked that his experience hitherto had not yielded an example of what was here unquestionably shown forth as a clinical fact; viz., the vanishing, within ten days, of a regurgitant aortic murmur, proved to be such by the usual clinical tests and by *post mortem* examination, and this without any obscurity in the heart's sounds, or any interference of pulmonary râles or of pericardial effusion to disturb the diagnosis. The experience of ordinary cases of this murmur is that it is one of the most permanent of acoustic phenomena, and that, once fairly established, it may be counted on to persist as long as its physical cause exists; i.e., either until the death of the patient, or until the heart's action is so much weakened by mechanical engorgement or other causes as to give rise to the weakening or suppression of its sounds, and especially of the aortic second sound. Dr. Walshe, in his well known work on *Diseases of the Heart* (3rd edition, p. 380), says: "Aortic regurgitant murmur is, so far as I know, constant, where its physical cause exists; weakness of ventricular action obviously cannot have the same effect in rendering a regurgitant, as a direct, murmur obscure." It is true that in the succeeding page, Dr. Walshe admits certain qualifications as to the clinical and practical value of this general statement; but none of these is in any degree applicable to the case just narrated. Professor Sanders, of Edinburgh, in a paper specially "On the Variation and Vanishing of Cardiac Organic Valvular Murmurs" (*Edinburgh Medical Journal*, January 1868, p. 586), has stated his experience as to all of these in succession; and, in reference to the regurgitant aortic murmur, while admitting its occasional obscurity, and even inaudibility, in presence of pulmonary râles, and to unpractised ears, distinctly affirms: "I cannot say that I have found the regurgitant murmur, when not obscured by other sounds, ever completely disappear, so as to be inaudible to a practised auscultator." In the present instance, a murmur which was specially designated as aortic regurgitant in presence of a large class, and which was distinctly recognised as such by several besides Dr. Gairdner himself, became wholly inaudible to all those who had recognised it with ease ten days before. The only question that can be raised is, whether the disappearance of the murmur was, or was not, due to the diminution in degree of the valvular incompetency, owing to increased deposit of fibrin, as indicated in the *post mortem* examination.

It is remarkable that in one other case at present in Dr. Gairdner's wards, a young woman under treatment for anæsthetic paraplegia, a murmur resembling that of aortic regurgitation has appeared, disappeared, and reappeared, during about two months that she has been under observation. But in this case Dr. Gairdner was at first disposed to think that there had been a fallacy in observation; and now, after distinct verification of the original diagnosis of probable organic disease, the question remains, if the murmur be of valvular or of aneurismal origin. Dr. Gairdner inclines to the latter view. The case, however, is one full of difficulty in many respects; and in the meantime it gives no additional light on the subject in question.

YELLOW FEVER.—The English Vice-Consul at Ciudad Bolivar, on the Orinoco River, Venezuela, reports (*Nature*) that an old woman had applied an efficacious remedy for yellow fever and black vomit. It is the juice of the leaves of the vervain plant, which is obtained by bruising, and is taken in small doses three times a day. Injections of the same juice are also administered every two hours until the bowels are completely relieved of their contents. The medical men have adopted the remedy, and the number of fatal cases has been much reduced. The leaves of the female plant alone are used.