

illustrating the same degree of amnesia has been recorded by Dr. P. J. Cremen,<sup>50</sup> the essential details of which are as follows.

CASE 21.—The patient, a man of intemperate habits, was admitted to the Cork North Infirmary on April 10th, 1885. He was the subject of aortic and mitral disease, fully compensated, which had followed an attack of rheumatic fever in childhood. About October, 1883, he suddenly became giddy, with loss of speech, but no paralysis of limbs. He continued to work during the same day, and during five months his speech slowly improved very much. "He now commenced to do some light work, being able to make himself understood fairly well, occasionally using one word for another." About Christmas, 1884, on awaking one morning, he was surprised to find that he had lost the sight of his left eye. (This was subsequently found to be due to embolism of the central artery of the retina.) "He continued otherwise the same as regards speech, until about four weeks before admission, when, after a hard day's work, whilst in the act of holding a candle, he suddenly allowed it to drop and commenced to cry. His speech again became very imperfect and his face was slightly drawn, but there was no appreciable paralysis of limbs." Since then no change had taken place in his symptoms. On admission volitional speech was much affected. When asked of what he complained he pointed to his left temple and said he had a pain there, and on being asked if it was constant he said not. He also pointed to the left eye, and indicated that he could not see with it. His memory of names, places, and things was very defective. He did not recollect the names of his father, mother, or other near relatives. When asked to try, he made an effort to do so, sometimes repeating his own name instead, evidently knowing that he was wrong. When corrected, he repeated the name distinctly, having no difficulty whatever in articulation, the latter being very distinct. When asked to name the organs of sense he called the ear a "hair-pin," and named correctly the nose and tongue; he did not recollect the name of the eye, and called this also the "tongue"; but when corrected said, "Yes, eye; that's right." When further questioned he became confused, calling nearly everything that was shown to him "tongue." His vocabulary was, however, liable to variation from day to day. When asked to repeat the Lord's Prayer he failed to do so, but repeated another prayer instead; however, when given the first sentence he repeated it through correctly. His understanding of spoken and written language was perfect. He could repeat accurately and quickly words spoken before him. Notwithstanding this great defect of memory of words, he could read aloud clearly and distinctly, without hesitation, a page of a book from beginning to end. The following composition, in which it is impossible to discover any meaning, was written by him at my request as the history of his case: "Cork Molens.—I noscent nountg ani ammbys gosibsyoyey imitwats yab I bet yas you me sent smi le good me much cocleped." He wrote his own name and residence accurately, and could write numerals to any extent without dictation. The following will exemplify defects in writing from dictation. When asked to write the word "just" he wrote "fugl," for "subject" "suptect," for "speak" "sery," for "found" "spunt." Strange to say, when told to spell those words he did so accurately in every instance, and when asked why he did not write them he explained that he had forgotten how to make the letters. He remained in hospital for about three months, and left much improved in his speech, being able to carry on a conversation fairly well, though occasionally using one word for another. He could name objects better. Volitional writing was not improved; writing from dictation was slightly better.

Apart from the marked amnesia with preservation of ability to read aloud, this case is remarkable for the gibberish character of the patient's writing, combined with an ability to spell correctly—two characters that do not often go together. In this relation it may be mentioned that it sometimes happens that the speech of patients is entirely limited to a mere imitative repetition of words spoken in their hearing, while they are without the power of volunteering any statement—that is, their auditory word-centres respond only to direct sensory incitations, and not at all to those of an associational or volitional order. In these cases (usually included under the term "echolalia") a marked general mental impairment almost invariably co-exists.

A defect of this kind (occurring in a woman who was hemiplegic from cerebral hæmorrhage) has been recorded by Professor Béhier.<sup>51</sup> She was born in Italy, and had resided both in Spain and France; of the three languages she had thus acquired she had completely forgotten the Italian and Spanish, and had only retained a most limited use of French. In this latter language *she only repeated like an echo* the words pronounced in her presence, without, however, attaching any meaning to them. But in the case of a woman seen at the Salpêtrière by Bateman the mimetic tendency was much stronger. She even reproduced foreign words with which she had never been familiar. It is clear that in such a case as this there must have been a mental degradation of a much wider kind than that which occurs when the auditory word-centre alone is reduced to its lowest grade of functional activity.

<sup>50</sup> Brit. Med. Jour., Jan. 2nd, 1886, p. 14.

<sup>51</sup> Gazette des Hôpitaux, May 16th, 1867.

## ON FUNCTIONAL MURMURS: A FURTHER CONTRIBUTION IN ILLUSTRATION OF THE MIMICRY OF ORGANIC HEART DISEASE.

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SINCE my paper on Functional Heart Murmur appeared in THE LANCET of July 27th, 1895, I have met with a number of additional cases illustrating the difficulties attending the diagnosis of heart disease. A few of these I have selected in order to call attention once more to the frequency with which functional disturbance simulates organic mischief. The subject is of great importance, and I am the more disposed to pursue it because of the interest shown by a number of thoughtful clinical observers who noticed the paper. I ventured to refer to three varieties of functional murmur—namely, the cardio-hæmic or anæmic, the cardio-muscular or neuro-typtic (so-called), and the cardio-respiratory. To this nomenclature I am disposed to adhere, though I am quite free to admit that the explanation offered of the murmurs may not be entirely correct. In some respects the appended cases resemble closely those alluded to in my first paper; in others they differ, and chiefly in point of time that the murmurs occupy in the cardiac cycle.

CASE 1.—A man, aged fifty-two years, a life-long neurotic, who lived in dread of the development of organic disease, complained of dyspepsia, pain after food, flatulency, loss of appetite, some reduction in weight, palpitation, and a sense of general weakness. The heart rate averaged 85; the apex beat was in the fifth interspace, about half an inch to the left of the usual position. On auscultation at the apex the first sound was reduplicated; the second part of the double sound was little more than an echo, and was followed immediately by a well-marked blowing murmur, which ran up to the second sound. This post-systolic murmur was audible from the apex to the sternum and up to the lower border of the third rib, was lost over the aortic valves, and was scarcely, if at all, conducted beyond the apex towards the left. It disappeared when the patient held a deep inspiration, was intensified when he was lying on the left side, and materially diminished when on the right side. It was also diminished on resting, but did not entirely cease.

CASE 2.—A young man, aged twenty-one years, was examined by a medical man and passed for an office under a public body in June, 1896, when no murmur was detected. He was examined by another practitioner within the next few weeks, and a murmur found, and again with the same result six weeks later. He was advised to consult his own medical man, who at the first examination detected the murmur; but on seeing the patient a few days later when at rest failed to do so, and sent him to me. The patient was thin and pale, and was not conscious of palpitation or shortness of breath. He had never had rheumatism, and was able to lie on either side at night. When sitting the pulse was 126, small, regular, and compressible. When lying on the back a voluminous pulsation in the precordium was visible, with apparent displacement of the apex-beat downwards and outwards. This was, however, more apparent than real, as the nipple was three-quarters of an inch above its natural point. The apex was in the fifth interspace two and a half inches from the border of the sternum. On auscultation, when standing or sitting, a short, loud, blowing, systolic murmur could be heard at the apex and half an inch to the left of that point. This was conducted along the fifth rib to the centre of the sternum. The murmur was intensified during inspiration and was at a minimum at the end of expiration. On drawing a long breath as the end of inspiration was approached it became very high in pitch and resembled the sound caused by squeezing air through a hole in an india-rubber ball. When he held his breath at the end of a deep inspiration the heart became suddenly slower and two or three deliberate beats occurred which were unaccompanied by murmur. Fifteen minutes' rest in the recumbent position brought the heart down to 110, when the murmur could no longer be heard so long as he held his breath at the end of a deep inspiration, and the area over which the murmur was heard under other conditions was much reduced—that is to say, it was only to be detected over the immediate apex after rest.

CASE 3.—A woman, aged about twenty-eight years, was seen for headaches and nervous depression about four months

THE Farnham Rural District Council on April 1st granted an extra donation of £20 to the medical officer for his special services during the recent outbreak of diphtheria.

after her first confinement. The patient was somewhat anæmic, but otherwise looked well. She was able to move about briskly and was free from breathlessness. On examination of the heart the apex beat was found to be somewhat prominent, but in its normal position. The heart sounds were clear and rather accentuated, about eighty-five in the minute. A well-marked blowing murmur was heard in the fourth interspace about one inch from the left border of the sternum. It distinctly followed the first sound, and appeared to run up to the second sound, an interval occurring between the first sound and the murmur. The point of maximum intensity of this post-systolic bruit was at the place indicated, and it was well heard beside the sternum, but not at the base, and was scarcely audible at the extreme apex and not at all outside of it. At the end of a deep inspiration the murmur was absent. It disappeared after treatment by rest and arsenic.

CASE 4.—This patient, a married woman aged forty-one years, had been an invalid for some years. Fifteen years before she came under observation the ovaries were removed for tubal disease. She had not menstruated since the operation. She suffered much from palpitation and nervousness. The pulse was regular, jerky, 100, even when lying in bed. The area of the cardiac impulse was increased, and the whole of the precordial region heaved more or less with the systole. The extreme apex was behind the fifth rib three inches from the left border of the sternum. Notwithstanding the excessive impulse the cardiac dulness was slightly, if at all, increased. On auscultation at the extreme apex the sounds were very loud and "membranous," and a short blowing murmur accompanied the first sound. This was best marked towards the termination of the sound and increased in intensity as the sternum was approached, where it became musical. It was audible as high as the third interspace as a musical sound, but was merged in the second interspace in a soft blowing murmur (hæmic). At the end of a full breath it was much diminished, and it was greatly exaggerated when the patient lay on her right side. It was not audible to the left of the apex. At times when the patient was free from excitement the murmur was entirely absent.

CASE 5.—A boy, aged twelve years, with a nervous history, often had attacks of the nature of hysteria. He complained of giddiness and some shortness of breath on exertion. He had never had rheumatism. On examination of the heart there was a tumultuous heaving impulse. The apex was a little below the normal position; there was no thrill. A loud, short, systolic murmur could be heard to the left of the sternum. It was best marked about the fifth rib and was not audible at the immediate apex. There were no basic murmurs. The heart beat was 120, jerky and regular. The murmur became much more localised after resting, even though the number of heart beats was not reduced to any extent. On drawing a deep breath the murmur was absent at the end of inspiration. On lying on the right side the murmur was first intensified by the movement, but after a few minutes disappeared altogether.

CASE 6.—A man, aged twenty-nine years, had suffered from cough, night-sweats, and some emaciation for three or four months. He was highly nervous and somewhat short of breath. The right chest was flat beneath the clavicle, where the note was relatively dull. When standing, a loud, short, diastolic murmur could be heard to the right of the sternum. The point of maximum intensity was just above the right nipple, but it was audible from the clavicle to the fifth rib. The heart beat was jerky and nervous (120 in the minute), but after ten minutes' rest came down to 90 and the murmur disappeared. It also disappeared on the patient drawing a long breath and holding it. Over the same area a well-marked systolic cardio-respiratory murmur was heard during a quiet deep inspiration, but this was quite distinct from the sound already referred to. The pulse was small and rapid, but not suggestive of Corrigan's.

CASE 7.—Another case, closely resembling the above, was that of a man, aged thirty-eight years, who was admitted into the Royal Infirmary, Newcastle, in December, 1896, for cough and hæmoptysis. There was some retraction of the right lung and evidence of early phthisis. There was a short, whiffing, early diastolic murmur which terminated abruptly in the second sound. It was best heard between the apex and the sternum along the fifth interspace. It was loud on excitement, but disappeared on resting or on holding the breath.

CASE 8.—A man, aged twenty-nine years, of habitually nervous tendency, had complained for upwards of three years

of a pain about the left nipple, which he ascribed to his heart. He had frequent attacks of palpitation with a feeling of intense apprehension of approaching danger, when he trembled all over. The pain was worse at night. The heart was rapid, 100 in a minute when standing. The left apex beat was in the nipple line between the fifth and sixth ribs. In the erect posture a loud, systolic, blowing murmur was heard at the apex, beyond which it was not conducted, being limited to within a narrow circle at this point. This murmur was intensified on drawing a long breath, and was increased in loudness as the inspiration reached its termination, but on holding a very long breath it disappeared. After lying down for a few minutes it was no longer audible.

A few points stand out prominently in connexion with these mimetic murmurs: firstly, they occur in highly neurotic people; secondly, they are frequently associated with violently acting ventricles independent of lung conditions; thirdly, they may be intimately connected with respiration and structural alterations in the lungs; fourthly, they are not limited to any cardiac area; fifthly, they may be systolic, post systolic, or early diastolic; and sixthly, they can be diagnosed by an appeal to certain tests, chiefly rest, position, and respiratory movements. (See table at end of first paper, THE LANCET, July 27th, 1895, p. 196).

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## A CASE OF PHTHISIS COMMUNICATED FROM HUSBAND TO WIFE.

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A WOMAN, aged thirty-six years, was admitted into the Westminster Hospital suffering from phthisis. Both her father and mother were alive and well, and she had three sisters and one brother all grown up and in good health. There was no history of phthisis in her family on either side. Her husband was apparently healthy when she married him, but his father and one sister died from phthisis. After a time he developed a cough, spat blood, and ultimately died, it being stated on the certificate that the cause of death was phthisis. During the last seven months of his life he was too weak to go out, and his wife nursed him incessantly. They had only one small room, and the fire was kept burning day and night. He expectorated a great deal, and no directions were given her as to the use of antiseptics. Soon after his death she noticed that she had a bad cough, and when she came under observation it was found that she had cavernous breathing with whispering pectoriloquy at the right apex and dulness and crepitation at the left. She stated that she was no worse off in consequence of her husband's death, but that, on the contrary, her means had improved, as during her husband's illness she had to keep him.

*Remarks.*—This case is of no particular interest in itself, but it is so when taken in conjunction with similar cases recorded in THE LANCET of May 22nd, 1880, and a similar series of cases published by Dr. Reginald Thompson in THE LANCET of Nov. 6th of the same year, as marking the change of opinion respecting the contagiousness of phthisis which has taken place since that time. Sixteen years ago such cases were regarded with suspicion and their publication excited hostile criticism; now they are so common that they excite but little comment. Dr. Hermann Weber<sup>1</sup> gave details of thirty-nine wives who became infected from marrying phthisical husbands, and in several cases the husband infected more than one wife. The reason the husband infects the wife more frequently than the wife the husband is explained by the fact that when the husband is ill the wife nurses him, but when the wife is ill the husband from the increased demands on his resources has to pay closer attention to business and is less at home than usual. In connexion with the subject of the contagiousness of phthisis it is difficult to avoid reference to the risk which is run by healthy people on long sea voyages if compelled to occupy the same cabin with patients suffering from advanced phthisis. The sleeping cars which convey large numbers of phthisical patients to the Riviera and other popular health resorts at certain periods of the year are not above suspicion, and much greater care should be taken in having them aired and disinfected than is at present the case.

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<sup>1</sup> Transactions of the Clinical Society, vol. vii.