(2.) That there are cases in which disorder of mind exists without insanity.

(3.) That, therefore, insanity is not essentially a disorder of mind, nor ought insanity and unsoundness of mind to be used as convertible terms; but

(4.) That our concept of insanity is not complete until it is understood to include, as a necessary and integral element, disorder of conduct.

Dr. Bedford Pierce failed to follow Dr. Mercier in making a sharp distinction between disorder of conduct and disorder of mind. He thought the case quoted would be more correctly described as one of disorder of mind, in which the disorder was manifested by extraordinary conduct. Dr. Pierce further alluded to a patient, a clergyman, whose conduct had become quite inconsistent with his past life and the conduct of one in his position. After a careful examination, it was found impossible to sign a certificate of insanity. That the patient was insane and not responsible was quite evident from the history of his letters, yet for several months there was risk of grave scandal in his parish. Dr. Pierce suggested that in certain cases the necessity of including "facts observed at the time of the examination" in a certificate might be advantageously omitted from certificates.

---

*Mental Symptoms Occurring in Bodily Diseases.** By Ernest Septimus Reynolds, M.D. (Lond.), M.R.C.P., Senior Physician to the Ancoats Hospital, Manchester; Physician to the Manchester Workhouse Infirmary and Lunatic Wards.

That it would be impossible for anyone in a single paper to adequately treat of the mental symptoms occurring in bodily diseases is self-evident. For it must be remembered, as Maudsley says, "that it is impossible to be out of sorts physically without being out of sorts mentally," so that the subject includes not only the slight emotional changes found in various diseases, but also the actual insanities produced by or accompanying them. All that I propose to do in this communication is to give a short account of the mental changes which I have noticed during a four years' residence in the Manchester Royal Infirmary, and during a longer experience as visiting physician to the Manchester Workhouse Infirmary, where I have charge of over 800 medical beds.

We must first investigate the *slight mental changes* accompanying disease, by which I mean those changes in the

* Read at the Annual Meeting of the British Medical Association, London, 1895.

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

feelings and emotions not amounting to actual certifiable insanity. These changes, as I have already said, occur to a greater or less extent in all bodily illnesses; but to describe them accurately and minutely would require the language of a Maudsley. Would that I could give more than the crudest outline of them.

We may divide these mental states roughly into pleasurable feelings, depressed feelings, and conditions of mental dulness, corresponding in actual insanity to mania, melancholia, and dementia. In addition we see marked irritability of temper and occasionally feelings of terror.

Pleasurable feelings, as might be expected, are not common accompaniments of bodily disease. They are met with in some phthisical patients, who tell you day after day, with a smiling face and bright eager eyes, how much better they are, and this even when death is imminent. Occasionally, in patients dying from various diseases, especially if there is deep religious feeling, the very act of dying is accompanied by a merciful and pleasurable feeling due to an anticipation of a freedom from suffering and an entering into a future life of bliss. The morbid condition produced by many stimulating poisons, such as alcohol, chloroform, cannabis indica, and opium, is again one of intense but transient pleasure.

Mental depression is by far the commonest slight emotional state met with in bodily disease. It may be a natural depression owing to the presence of pain, or to the fact that the person is missing opportunities or losing money from his inability to do his work; or it may be an unnatural depression, quite incommensurate with the surrounding circumstances, where there is neither bodily nor worldly distress, and even where the person knows full well that he is recovering. Depression is pre-eminently and proverbially found in abdominal diseases affecting the liver, stomach, and intestines. Curiously enough, although depression and irritability of temper were spoken of in former ages as "fits of the spleen," it is almost unknown nowadays to find mental changes in splenic disorders. In jaundice, from whatever cause, depression is most intense, and in sea-sickness it is so great that the feelings during a storm at sea have been divided into three stages—first, when you are afraid the ship will go down; secondly, when you do not care whether it goes down or not; and, thirdly, when you are afraid it will not go down. Contrary to the usual ideas, depression,

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

especially associated with more or less hypochondriasis, is met with in phthisis, and markedly so in my experience in the wards of a workhouse infirmary, where the *spes phthisica* is but rarely seen. Intense depression often accompanies and sometimes follows various fevers, such as rheumatism, and more particularly, as we have most of us experienced, influenza. In oxaluria and phosphaturia, either as causes or as mere accompaniments, there is often mental depression, frequently accompanied by hypochondriasis. In the interparoxysmal stages of epilepsy hypochondriasis and depression are frequently marked symptoms, the whining complaints of these patients being extremely trying to all who have to do with them. Again, after the pleasurable stage of many stimulating poisons, such as opium and cannabis indica, comes the stage of depression, and workers with carbon bisulphide have told me that in the early mornings before they have commenced work in these noxious fumes they are depressed almost to the point of suicide.

Associated with alcoholic paralysis, especially in women, there is often great depression, but in men more frequently an exalted state.

Movable kidney is very frequently accompanied by hypochondriasis; in fact, if a woman complains of vague dragging abdominal pain, and is at the same time hypochondriacal, a movable kidney should always be looked for.

Another cause of depression in women, though fortunately a rare one, is the presence of hair on the face. This depression not unfrequently passes into true melancholia or the insanity of persecution, and as the cause is so difficult to remove the outlook is not very hopeful.

Mental dulness, which must of course be distinguished from unconsciousness, is often found in bodily disease, as in various cerebral conditions, notably, in cerebral tumour, in intense headache, in phthisis, in cyanotic conditions, in disorders of the liver (such as cirrhosis and cancer), in cancer of the stomach, and as the result of various poisons. Possibly the peculiar and providential state of the majority of dying persons can be included as a form of mental dulness, for how rarely do we see actual suffering when death is approaching! The best example of mental dulness is perhaps found in myxœdema.

Irritability of temper is most frequently met with in sick children, especially at the onset and during the decline of the various fevers. It is also a prominent symptom in two

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

diseases of adults, namely, phthisis and diabetes, where complaints of ill-treatment, bad feeding, and bad attention are a constant trial to both doctors and nurses. It is a common feature in the gouty and those affected with various forms of dyspepsia, whether due to stomach or liver disease, and may be an accompaniment of painful conditions such as toothache or sciatica.

Feelings of terror are seen in hydrophobia and in delirium tremens, but in both these cases they are probably accompanied with hallucinations. An *appearance* of terror is generally seen both in chorea and Graves' disease, but I cannot say whether there is an actual *feeling* of terror in these two conditions.

In considering *actual insanity connected with bodily diseases,* we should not include the insanities connected with natural bodily changes, such as those of puberty, childbirth, and the climacteric and senile periods.

Insanity may occur in any of the following classes of disease:—1. Organic disease of the nervous system, whether cerebral or spinal, and here we may include Graves' diseases. 2. Disease of the heart. 3. Disease of the lungs (excluding phthisis). 4. Disease of the digestive organs. 5. Diseases of the urinary and generative organs. 6. Certain general diseases, such as gout, diabetes, and myxœdema. 7. Diseases caused by germs, including tubercle and rheumatic fever. 8. Conditions produced by various vegetable and mineral poisons. 9. Traumata, including surgical operations.

Each of these headings is sufficient to form the basis of a separate paper, and some of them the basis even of a treatise. It will be impossible for me to do more than make a few cursory remarks on each.

Insanity secondary to *organic disease of the brain* may be found in cerebral softening or hæmorrhage. It may take the form of acute mania, with noisy and incoherent raving and dirty habits; there may be melancholia even with marked suicidal tendency, or there may be simple-mindedness lapsing by degrees into the most complete dementia. Those in whom the symptoms, coming on early, are more or less maniacal, may recover from their mental affection in a few days or weeks, but there is little hope of recovery for those who gradually pass into a deeper and deeper dementia. In the majority of hemiplegics, however, the mental symptoms are much slighter than at first sight would appear.

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

They are very emotional, often crying, sometimes laughing without cause, they are slow in comprehension and in judgment, and the memory may be slightly impaired; but beyond this there is but slight mental change. Some years ago I had occasion to examine into the mental state of about eighty hemiplegics to test their testamentary capacity, and I found that those who had left-sided hemiplegia were almost all quite capable of making a will, and it was only amongst those with right-sided hemiplegia that I found any large proportion who were so demented as to be void of this important legal power. This is what one would have imagined *à priori* from the great importance of the left hemisphere as a speech centre.

I have on several occasions seen patients suffering merely from sensory aphasia dealt with as lunatics, but a careful distinction must be drawn between them. A person with total sensory aphasia, word blindness and word deafness, if left to himself would probably not show by his conduct the slightest sign of insanity, though he might not be capable of sustained reasoning; his emotions, feeling, and will might be normal, but his highest intellect be affected. Such cases of complete sensory aphasia are not common, however, as the condition is generally either one of word blindness or word deafness. In either case the patients may appear to the untrained observer to be insane, because from their verbal amnesia they name common articles quite wrongly, but that they know the use of such articles is easily proved. Again in word deafness they give utterly wrong answers or perform wrong actions in reply to questions and demands, but in all the ordinary actions of life they act as others would. Most of them, in fact, are quite aware of, and exactly understand, their infirmity just as much as a deaf mute does, and, as with the deaf mute, these patients are often unusually sharp and acute in observation.

In brain tumour the mental symptoms, as a rule, come on late, and are generally those of mental dulness, passing into a steadily progressive dementia. Occasionally, from an irritation of parts in the neighbourhood or from pressure of parts at a distance, there are marked hallucinations with maniacal excitement; melancholia is sometimes seen, or a mania succeeded by melancholia and dementia.

Actual insanity, associated with Graves' disease, is in my experience extremely rare. I have only seen one case in an asylum, a woman suffering from acute mania; and I have

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

lately seen in a nurse, suffering from commencing Graves' disease, a simple depression, passing on to marked depression, with irritability of temper and slight delusions of suspicion.

The mental symptoms of epilepsy are too well known to require further remark.

Cases of insanity connected with organic spinal disease are very rare; in fact, I have only seen them in connection with tabes dorsalis, in which very uncommonly typical symptoms of this disease, which have been present for months or years, are followed by general paralysis of the insane. One case of tabes dorsalis at present under my care used to have attacks of great excitement, accompanied with violence and shouting. These attacks we found to be due to hallucinations of hearing, the patient imagining that other patients in the wards were accusing him of all sorts of mean actions. Another case I have lately had to send to my lunatic wards, as he more or less suddenly developed marked delusions of suspicion and hallucinations of hearing. In neither of these two cases were there any signs of general paralysis of the insane.*

One occasionally meets with insanity during the progress of *valvular disease of the heart.* It is sometimes impulsive in nature, two cases of aortic disease under my care having committed suicide without any known previous mental derangement, one by jumping through a window and the other down the well of a staircase. More frequently it takes the form of delusions of suspicion and persecution, the patient saying that his food and medicine are poisoned, or that the other patients in the ward are talking about him or ill-using him. Very rarely they have ideas of grandeur, as an aortic case at present in the Manchester Workhouse, who became insane a few weeks ago, and now imagines he is the Master of the Workhouse, and that the whole place belongs to him. Personally I have not been able from the fairly numerous cases of insanity in heart disease that I have seen in the past twelve years to differentiate various forms of insanity as peculiar to various forms of heart disease, as has been done by Dr. Mickle. It is generally in the last stages of heart disease associated with difficulty of breathing, cyanosis, and dilated right heart that I have seen mental symptoms appear. Often also the mental symptoms are only

* In advanced disseminated sclerosis there may be a melancholia or a dementia, but I have only seen these conditions when the brain, as well as the cord, was affected with the disease.

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

present at night, the patient being perfectly normal during the day.

Apart from phthisis, mental symptoms may appear in *diseases of the lungs*, especially when the right heart is dilated, as in bronchitis and emphysema. Here again, as in heart disease, the mental troubles are more likely to develop at night. There may be delirium, hallucinations of sight, vague fears, and suicidal impulse.

I pass over insanity occurring in diseases of the digestive system, as it is so rarely seen in general hospital wards.

In the terminal stage of *gouty kidney*, instead of the usual convulsions and coma so commonly seen in large white kidney, there may appear a wild delirium, and more commonly a noisy acute mania, with possibly homicidal impulse and delusions of persecution and poisoning, the immediate friends being often the subjects of attack. Two of the most horrible death scenes I have ever witnessed were cases of this kind, in one of which the patient shouted and raved for hours against his children, using language of the most blasphemous description, and in the other accusations of ill-usage and robbery quite unfounded in character were levelled against the dearest friends.

We now must consider briefly the *diseases caused by germs*, and here we shall find a comparatively large amount of mental disease. Very rarely pneumonia is accompanied by true acute delirious mania with the wildest excitement, one case of which I have seen, the man dying about eight hours after the sudden commencement of the mania. This condition must, of course, be carefully distinguished from ordinary delirium tremens, which is so very common in the pneumonia of alcoholics. Not very unfrequently we see during the convalescence from pneumonia a melancholia with delusions of poisoning and suspicion, sometimes a dementia, these cases finally recovering in a few days or weeks. Influenza may set in with very acute mania with great excitement, delusions and hallucinations, recovery occurring as a rule. Or there may be suicidal attempts in the early stage. After influenza melancholia may occur, less frequently mania. Typhoid fever, like pneumonia, is not very rarely followed either by a stuporose demented state or by delusions of persecution and poisoning, every case I have seen ending in recovery. So far as I can remember I have never seen actual insanity accompanying or following acute rheumatism. Is it not possible that the

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

rarity of mental symptoms, and also of hyperpyrexia in acute rheumatism, as compared with former times, is due to an early and judicious use of salicylic acid and its compounds?* In syphilis the mental symptoms, such as acute mania, and more commonly dementia, are probably more due to the actual gross pathological changes in the brain and its membranes, rather than to the germ itself, or to any chemical substance it may produce.

I must now consider the somewhat vexed question of phthisical insanity. I have seen, as, of course, every medical officer in a large county asylum must have seen, and especially if the asylum is old, overcrowded, badly lighted, and badly ventilated, how large a proportion of the insane die of phthisis. But let us look at the question from another point of view, and consider how many phthisical patients in a general hospital become insane. I see over five hundred cases of tuberculosis every year, and the number who become insane is very few, certainly not more than ½ to 1 per cent. I can recall one case of acute mania in a girl with commencing phthisis, but there was marked hereditary predisposition, and the type of mania was exactly like that seen in female adolescent insanity. More commonly the insanity comes on during the long course of chronic phthisis, the patients developing delusions of suspicion and poisoning, occasionally with suicidal attempts, but the type of insanity has appeared to me to be in no wise different (except in the prognosis) from the insanity after pneumonia or typhoid fever. From my experience, then, I should say that insanity, and possibly a particular form of insanity, may predispose to phthisis, but I could not say, and do not believe, that phthisis predisposes to insanity in any more marked degree than the other fevers.

Of the many cases of *insanity caused by various poisons* I shall only mention those caused by alcohol, carbon bisulphide, and lead. Those due to alcohol are already sufficiently well known, but I would like to say a word on the peculiar loss of memory of time which is so commonly found in alcoholic paralytics. In many of these cases, in fact, the whole of the mental symptoms seem to depend on this one factor.† I have often thought it would be a comparatively

* I have lately had under my care a case of gonorrhœal rheumatism, a boy aged 18, who suddenly developed most violent mania. Mental recovery occurred in a month.

† In more marked cases there is also a total loss of memory of place, so that the patient has not the slightest idea where he is.

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

easy research to discover the exact seat and nature of the lesion of this loss of time memory, for in how few other mental cases do we find only a single mental factor disordered. In other cases of alcoholic paralysis we occasionally see a peculiar delusion that the patient has a child in bed, and this idea is found, not only in women, but sometimes in men.

Of late years a process of "curing" or "killing" (as it is termed by the workmen) india-rubber so as to take away its adhesive quality has been introduced in the making of macintosh garments, and in this process large quantities of carbon disulphide vapour were inhaled by the workers. I say "were," for now under better regulations the workrooms are more thoroughly ventilated. Under the influence of the gas the workmen often became very talkative and incoherent, then had vivid hallucinations and became very excited, performing curious antics, such as turning summersaults and attempting to climb up walls. These symptoms, as a rule, gradually passed off in the open-air in a few minutes, and were followed by great depression, which only disappeared when the workmen again went into the workrooms. In some cases the mania was lasting, and the patients were often sent to asylums quite insane. When I was Assistant Medical Officer at the Cheadle Royal Asylum eleven years ago I well remember a case of very acute and lasting mania, finally passing into dementia, occurring in a Jew. The other day I found his son under my care at the workhouse (suffering from aortic disease), and he told me that his father had been the first to introduce this process into England, and that his insanity was entirely due to the carbon bisulphide. He further added that he knew of several of the workmen who had similarly been sent to asylums from the same cause.

In the many cases of lead-poisoning which one sees in a large industrial population I can only recall three cases of insanity due to lead. One was a young girl, who had very acute symptoms with delusions of persecution, and the other two were men, who from their tremors, speech, and partial dementia at first sight resembled cases of general paralysis, excepting that they were depressed rather than elated, and, moreover, the peculiar pallor and blue line easily established a diagnosis; one recovered perfectly, the other is at present under my care.

As regards mental symptoms following closely *after*

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press

injuries or operations, I should like to corroborate the opinion of Mr. Clinton Dent that true delirium tremens is more often diagnosed than seen. In the majority of such cases which I have seen in surgical wards there was not delirium tremens, but acute mania, often very noisy in character and associated with very vivid hallucinations of hearing and sometimes of sight. Usually the excitement is of a pleasant character, occasionally but more rarely accompanied by depression.

As a *summary* of these very discursive remarks my own experience leads me to conclude as follows:—(1) It is a comparatively rare occurrence for actual insanity to develop during the course of bodily disease. (2) In general hospitals mental disease most commonly occurs after fevers, poisons, injuries and operations, and heart disease, and perhaps in this order of frequency. (3) In the early stages of fevers, and after injuries and operations, mania is the common form of insanity, but in other conditions depression is more common, though the commonest form is an insanity with marked delusions of persecution (often associated with hallucinations of hearing), such as one sees in phthisis and heart disease and after typhoid fever. (4) There is no special form of insanity connected with special bodily disease, so that it is impossible to diagnose the bodily disease from the mental symptoms present. An exception to this is the peculiar mental condition associated with alcoholic paralysis, to which I have already alluded. (5) Insanity occurs with unusual frequency in bodily diseases associated with peripheral neuritis as in poisoning by alcohol, carbon monoxide, carbon bisulphide, and lead; pellagra, typhoid, typhus, scarlet, and rheumatic fevers, influenza, pneumonia, phthisis, syphilis, septicæmia, rheumatism, gout, and diabetes. Is it possible that in these conditions the factor which causes the changes in the peripheral nerves causes also some similar changes in the multitudinous internuncial fibres in the brain, and so produces disturbances in the normal cerebral reactions which go to make up a healthy mind? (6) Where the cause is not continuous, such as the poisons, the fevers, traumata, and operations, the mental symptoms in the great majority of cases disappear; in heart cases and phthisis they may disappear and reappear from time to time; but in some cases, such as the insanity connected with kidney disease, they only disappear with death.

https://doi.org/10.1192/bjp.42.176.17 Published online by Cambridge University Press