Mental Disorders dependent on Toxæmia. Part of an Address delivered by SIR DYCE DUCKWORTH, M.D., LL.D. Edin., F.R.C.P.Lond., at the General Meeting of the Medico-Psychological Association, London, November 21st, 1900.

(From the *Lancet* of November 24th, 1900.)

I propose in this address to call your attention to some phases of mental disorder which depend on toxæmic states These are now differentiated by the alienist, and it is only in recent times that their true nature has been unfolded. They have been long recognised as clinical features of disease, and the sources of them are as varied as are the separate toxic elements which induce them. Progress in physiological chemistry and bacteriology has now furnished us with the means to explain these conditions. The origin of these toxins is at least threefold. They may be generated in the body (auto-intoxicants), or by the malign working of microbes introduced from without, or they may arise by impregnation with organic poisons, or yet again result from the habits of alcoholism, chloralism, cocainism, and morphinism. In the majority of cases of insanity I suppose it will be conceded that there is a hereditary or inborn predisposition to the disorder, an instability or a tendency to this cerebral degeneration which may remain latent until conditions arise which are potent to elicit the breakdown. In the class of mental disorders we are now to consider there may or may not be this inherited fault of brain tissue. In many instances of toxic insanity we have to deal with persons who are already predisposed to mental instability, but in other cases a previously normal brain may be so damaged by toxic influences as to manifest aberration. We have long recognised the toxic effects on the nervous system of the altered metabolism induced by renal inadequacy in Bright's disease in the varied forms of uræmia, in that strange variety of autotoxy due to inability of the hepatic and muscular tissues to hold carbohydrate in reserve, resulting in diabetic coma, and that variety which depends on acute atrophy of the liver. We can now understand how these auto-intoxications act in disturbing the harmony of intimate brain-cell metabolism. Their effects are as certain as are those of poisons directly

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

introduced by the mouth or under the skin. The chemical functions of the brain cell are disordered in precisely the same manner. In the ordinary practice of medicine we are familiar with states of delirium and mental aberration in the course of the various fevers and in pneumonia. Recognising these as infective disorders we now know that we are dealing with the toxic effects of invading parasites, and that amongst the manifold expressions of their presence are nervous or brain symptoms. These are frequent in pneumonia, and strangely so when the pulmonary apex is involved. The reason for this is to me inscrutable, and I can only conceive that it results from some special local nervous relations which have hitherto escaped the recognition of the physiologists. With respect both to pneumonia(1) and the various fevers, I have to add that a careful inquiry in cases where grave nervous or mental symptoms have supervened, has almost always revealed the existence of personal or family neuropathic taint. Puerperal insanity occupies precisely the same position, and inquiries in these cases show that about one half of them occur in women of neurotic or insane proclivity. Toxic influences naturally affect them more readily and with greater gravity.(2) The insanity of lactation probably owns a different cause, and may be attributed to debility and imperfect nutrition, acting probably in many cases upon an originally unstable brain. What has been termed "post-operative insanity," due to infective influence, together with shock or exhaustion, and occurring within a few days after operation, may be similarly classified, although Mr. T. C. Dent is of the opinion that heredity of brain weakness plays but a small part in these cases, and that some of them apparently result from the influences of the anæsthetic agents employed or from iodoform impregnation.

No clearer evidence of the influence of auto-intoxication is afforded than that which results in aberrant cerebration in some cases of gout. The patient generates his own toxin in his tissues, and the effects are recognised in the form of stupor, delirium with delusions, and excitement, sometimes as melancholia, such symptoms lasting occasionally for days or for many weeks, and yielding to some overt metastatic gouty development, generally articular, or to an anti-gouty medication, with complete recovery. In enteric, typhus, and rheumatic fevers, erysipelas, cholera, influenza, diphtheria, and

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

scarlet fever, we have examples of distinct toxic infections, producing their specific lesions, and amongst them damage to cortical brain-cells leading to various grades of mental aberration, some of these ultimately leading to serious results, especially in cases where any predisposition to brain degeneration or insanity exists. These conditions were brought to the notice of the profession thirty-six years ago by Sir Herman Weber in a careful paper(3) in which he described the peculiarities of the mental states observed after the crisis had occurred in most of the acute diseases just mentioned. He laid much stress on the condition of shock and collapse which so often accompanies crises, and on the associated cardiac debility which doubtless plays a considerable part in the phenomena. The time was not then ripe for the suggestion that toxic influences were concerned. The slow recovery, especially after prolonged attacks, with relapses, of enteric fever, is due to the extreme wasting of the body generally, and the starvation of brain cells in particular. I would mention the peculiar loss of speech, or inability to speak, which occurs in some of these cases, several weeks (from five to eight) elapsing sometimes in which not one word is uttered.(4) We may notice a degree of this during the active stage of chorea, which I have long distinctly regarded as due to rheumatic toxæmia in the majority of instances and a consequent perverted cortical brain-cell metabolism.(5) Additional proof in support of this view has lately been afforded by the careful researches of Dr. F. J. Poynton and Dr. A. Paine, which have demonstrated apparently the specific diplococcus of true rheumatism.(6)

The malign cerebral distempers due to influenza are very definite, and have been well studied in the last epidemics of this plague. We find that all forms of insanity may result from it, and although there is reason to believe that in most instances of their occurrence there is an underlying neurotic proclivity, it is certain that the specific influenzal toxin affects the nervous system very gravely in most cases. According to Dr. John Turner all forms of acute mania are probably of toxic origin, affecting widely-spread areas of brain tissue, and he finds what he considers additional evidence in favour of this view, that there is commonly associated in fatal cases a fatty degeneration of the liver.(7) The condition of myxœdema sometimes leads to brain symptoms, such as instability, delusions, mania, and

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

melancholia, the result both in adults, and in the form of sporadic cretinism, of altered metabolism from deficient thyroidal influences. General paralysis is now regarded as coming into the category of auto-intoxications. Syphilis, as its common antecedent, does not, however, provide the toxin, and we must therefore view its part in the ætiology as leading to progressive degenerative nervous changes, which in turn so modify the intimate metabolism of the tissues as to set free toxic elements. Alcoholic and other excesses are also antecedent in other cases, and sometimes lead impregnation is reckoned as the ætiological factor. In cases of juvenile general paralysis congenital syphilis figures to the extent of at least 80 per cent., according to Dr. F. W. Mott, and he regards the malady as essentially due to the effect of syphilis on the germinal plasms of one or both parents. Jaundice, as an autotoxic condition, is accompanied sometimes by mental depression and hallucinations. I have, however, known xanthopsy to occur without any delusions in catarrhal jaundice.

We may next refer to toxæmic states induced by impregnation of the system with certain organic poisons, of which lead is certainly the most frequent and important source. This subject has been very fully studied. In many cases of saturnine encephalopathy we have to deal with compound conditions the result of possible syphilitic taint, together with chronic alcoholism. The fact that lead impregnation is related to the induction in many cases of gouty manifestations still further complicates the problem, and no less, too, the damaging effect of it on arterial and renal tissues has to be fairly considered in all such instances. The researches of Nissl, Oliver, and Robert Jones and others have now made plain for us the nature of the damage wrought upon the nervous system by this metal. We have to conceive that by degrees a saturation occurs, and chemical changes proceed in the brain and ganglionic cells whereby new compounds are formed within them. We might almost regard these, I think, as a formation of a chemical lead soap or a molecular combination of neutral fat with a saturnine base. Again, we have to bear in mind the insoluble salt formed by uric acid with lead. Albeit the changes noted may not always be due to direct chemical influence, for saturnine encephalopathy may occur and no lead be detected in the brain, as shown by Oliver. Like other

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

poisons, lead has a selective power in alighting upon and damaging tissues. Interference with normal metabolism in the cellular plasm, either by direct poisoning or by molecular chemical compounds of a fixed character interfering with function, may well lead to secondary and sclerous changes in the neurons. These, again, may be noxiously affected by freshly-formed autotoxins resulting from such impaired cellular nutrition. We are not now concerned with the specific forms of saturnine neuritis which are well ascertained to exist and to produce characteristic symptoms. The whole question of lead encephalopathy is therefore a very complex one. It is, however, certain that many cerebral distempers may issue from it, such as mania, melancholia, dementia with epilepsy, and stupor amounting to coma. Some of these conditions occur after very short exposure to lead impregnation. Whether general paralysis is ever strictly due to the specific influence of the poison is not yet quite determined. To be certain in the matter one must be able to eliminate the possibility of syphilitic and alcoholic influence. I am disposed to agree with Dr. Savage that saturnine taint is at least capable of inducing this condition and may do so.

With greater frequency than lead impregnation, we have to deal with alcohol as a poison introduced from without. We recognise the abuse of this as an active destroyer of nervous matter and vascular textures, and recent researches plainly indicate the damage done to the brain-cells and neurons and the perverse metabolism which is entailed by it. The conditions displayed under the varieties of subacute and acute alcoholism with delusions, mania, epileptiform attacks, and dementia are unfortunately only too familiar to all of us.

Lastly, we have to note the mental aberrations due to the vicious use of agents such as morphine, chloral hydrate, paraldehyde, ether, and cocaine, and to remark concerning all of them that their abuse increases in frequency with what we are pleased to call the advance of knowledge and civilisation. That our profession is in part to blame for some of this mischief I entertain little doubt. The resort to these and similar agents under conditions which hardly justify their employment, and which might often be met by other and simpler therapeutic measures, has often led to habits of secret intoxication by patients who indulge in them. The frequent handing over of

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

hypodermic syringes and these poisons to nurses is also to be blamed. The too ready sale of such agents by pharmacists and other tradesmen is a matter so serious that it now calls for some special legislation to restrict it. The danger lies in the special seduction of such agents for women and persons with unstable brains, and no care and precaution can be too great in prescribing for them. We are all familiar with the disastrous results of yielding to the cravings for hypnotics and sedatives, and know too well our impotency to do any permanent good in the great majority of such cases. We certainly find that the average patient is singularly intolerant of any pain in these days, and that he clamours for relief at any cost. Our forefathers and foremothers had to suffer more than we do, and I am not sure that they were always the worse for it. They certainly escaped the modern terrors of morphinism, chloralism, and cocainism, and the women of those days bravely endured their catamenial discomforts without recourse to stupefiants. I think a good deal of plainer living and higher thinking would avail much to abolish the too common resort to anodynes which unhappily now prevails so largely in several strata of society both in this and other countries.

In conclusion, we note that the various toxic agents which gain admission to the circulation exercise, as we might expect, their specific actions upon the several tissues of the body and manifest elective affinities for particular systems of neurons. We find in brain diseases, as in other morbid states, that the symptoms are the result not seldom of mixed infections, and are not always to be ascribed to any one toxin. There is often, indeed, a vicious circle of conditions, as is well seen in some cases of general paralysis, lead poisoning, and alcoholism, where several factors are clearly combined in the production of the successive phenomena, in such a series as primary cell intoxication, with the result of perverted nutrition and plasmic metabolism, with the production of new toxins, *e. g.* choline and neurine, and decay of their systems of neurons, the exudation and the subsequent sclerosis on the part of the vessels. The student of morbid cerebral anatomy has now to reckon with all these conditions, and the clinical psychologist has to determine, if he can, the relation of them to the different forms of mental distemper. Those fields of study remain as yet much unexplored, but they are already being occupied by

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

stalwart investigators, amongst whom I will claim a distinguished place for our countrymen Mott and Bevan Lewis. The knowledge already gained respecting the insanity of toxæmia cannot fail to prove useful for the purposes of treatment. We readily recognise how entirely preventable are most of these. Poisoning by lead, syphilis, alcohol, morphine, and fashionable anodynes is certainly preventable. The toxins formerly attendant on surgical interference are now practically abolished, while methods of treatment are gradually coming into use which encourage us to hope that we may overcome, or at least modify, the malign effects of such as induce the several infective diseases. We can now better understand than we did how purgatives and eliminants are often of use in dispersing some forms of mental distemper.

The views which now open out before us in respect of the pathogenic relations of toxæmic insanity would almost appear to justify a return to the older conceptions of humoral pathology. I am not concerned in this matter to take up any particular position dogmatically, either as a humoralist or purely neural pathologist. I think that our duty is to find the facts, and then to apply them in building up our pathological doctrines. As time goes on it becomes necessary to keep an open mind, and to change our views accordingly as modern research throws light on abstruse points. In the meantime I will venture to suggest that for the conditions we have been considering to-day we may consider them as dominated by a pathological doctrine to which we may fairly apply the term "neuro-humoral." By solid advances of knowledge, and by revelations of fresh aspects of truth, legitimate medicine alone makes progress. Many of you are now engaged in building up on sure foundations an important part of the great fabric of medicine, and some of us who thirty years ago imagined that small progress was being made with this particular work are now satisfied that it is assuming in your hands stateliness and dignity, and that it no less affords evidence of durability. I have ventured to address you to-day from the standpoint of general medicine, because general medicine most surely includes your special work. It would be bad for medicine and worse for you were such not the case. Some of us, indeed, could wish we were drawn closer together clinically in our great hospitals, where our students commonly see little else than the

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

beginnings or the transitory phases of mental aberration. But we urge them to fill up this gap in their education by attendance on lectures and practice, and in my own school we have full equipment and arrangements for this purpose. Let me add, lastly, that we fully recognise the debt which psychological medicine in this country owes to your Association, and we regard with full sympathy and interest your energy and your constant progress.

(1) Cerebral symptoms in pneumonia may be dependent on grosser lesions than those due to brain-cell intoxication, as when pneumococcal meningitis forms part of the disorder.—(2) I am fortified in this opinion by Dr. Savage's experience, which affords proof that persons neurotically disposed are more than others vulnerable to the influence of specific infection.—(3) *Transactions* of the Royal Medical Chirurgical Society of London, 1865.—(4) St. Bartholomew's Hospital *Reports*, 1885, vol. xxi, p. 106.—(5) *Vide* my paper in the *Transactions* of the Eleventh International Medical Congress at Rome, *La Natura Reumatica della Corea*, vol. iii, p. 354.—(6) The *Lancet*, September 22nd, 1900, p. 861.—(7) *Brit. Med. Journ.*, September 12th, 1900, p. 808.

Discussion

At the General Meeting in London, 21st November, 1900.

The President.—I am sure that you will all agree in a hearty vote of thanks to Sir Dyce Duckworth for this most important address. It is a pleasure to us to have eminent physicians coming amongst us from time to time to aid us in breaking down the barriers between the general physician and the specialists which have too long existed. We welcome the distinguished guests present among us to-day, and I call on Sir William Gowers to favour us with his remarks on the address which we have just heard.

Sir William Gowers.—I can only express the very great interest with which I have listened to Sir Dyce Duckworth's most admirable address, which covers the ground so completely, that I feel unable to make additions to it.

Dr. Mott.—Sir Dyce Duckworth has been kind enough to refer to my work, and when a man occupying his position in the profession refers to a younger man's work as he has done to mine, it is a great encouragement. I thank him heartily. I quite agree with all that Sir Dyce Duckworth has said, and I am sure this Society has listened to the outcome of his long experience in practical medicine with great interest and with great profit. I have lately been studying the effect of poisons upon the nervous system, partly experimentally, partly pathologically, and feel that if we are to obtain results, we must, first of all, as Sir Dyce Duckworth has pointed out, consider the physiological aspects of the subject. Poisons, such as the alkaloids, have a selective influence upon the nervous system. Strychnia, for instance, has a special affinity for the spinal motor neurons; so also has the poison of tetanus; and rabies shows its selective influence by picking out even particular spinal motor neurons or their homologues. It does not seem to matter much whether there is a neuropathic or a psycopathic tendency; tetanus and rabies act upon all irrespective of these tendencies; but usually there are many factors at work, and I think the more we study disease the more we recognise a principal factor and a number of contributory factors. It is the contributory factors which generally cause the mental affection. The more insanity is studied the less doubt exists that heredity plays the most important part in causation—a less important part, I think, in alcoholic insanity and general paralysis than in other forms.

I consider that stress very often determines the effect on the nervous system where a toxin alone would not do so. A man who uses his brain or a certain

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

part of the nervous system excessively will be more likely to suffer degeneration of that particular part. Professor Edinger has called attention to this, and I have lately endeavoured to show, by collecting a large number of cases of tabes dorsalis, that his inferences are correct. A great majority of cases of locomotor ataxy occur in men who use their legs a great deal, such as postmen, engine-drivers, etc. In those patients who have manifested the disease in the arms first, I have found that these limbs have been excessively used. Professor Edinger has endeavoured to prove this by experiments on animals. When he injected rats with a poison which produced hæmolysis, and then bled them to produce excessive anæmia, no degeneration occurred; but if he put these rats in a wheel-cage, so that they were constantly compelled to use their legs, degeneration of the posterior columns of the cord ensued.

In Egypt, where hashish poisoning is very common, I believe that there is a form of insanity in which time and space are greatly increased, showing a special selective action on the kinæsthetic centres of the brain. Again, absinthe has effects somewhat like alcohol, but it also produces convulsions. If injected into animals epileptiform fits occur. According to the French alienists it is one of the common causes of epilepsy. I lately had the honour of addressing the Medical Society of Nottingham on the selective influence of poisons upon the nervous system, and then gave a number of such illustrations.

There are three factors in nearly all cases of mental affection—namely, the poison, the stress, and the inherited tendency to a psychosis or a neurosis. Physiologically, the nervous structures are either increased in excitability or depressed in excitability. We know that some poisons given in large doses will, although they are exciting poisons, act in a depressing manner; but if given in small doses, will act in an exciting manner. The converse is also true; so that very much depends upon the quantity of the poison, and upon the individual in whom the poison is acting.

Dr. SAVAGE.—I feel that delirium is to the general physician what acute mania is to us, and there is a certain number of cases in which toxic influence should be suspected, although as yet the toxin has not been traced. Acute delirious mania is strikingly similar to acute alcoholism, severe pneumonia, typhoid, etc., and one feels sure that some observer will yet discover what is the auto-toxin which gives rise to the first-named. I remember, many years ago, Sir Samuel Wilks saying, "I wonder whether it is true that the neurotic person is more liable to delirium in fevers than others." I took the opportunity of going to several of the fever hospitals for information on that point, but failed to confirm it, owing to insufficient records. Still, it seems highly probable that the neurotic individual should be the more delirious with the rise of temperature. A great number of puerperal cases have a septic origin, and I think that anything which will produce delirium in an ordinary person will, or may, produce insanity in the neurotic.

Dr. GOODALL.—Although, as a rule, no bacteria are found in cases of acute delirium and delirious mania, yet they have been demonstrated in some. In those cases subsequent to fevers, like pneumonia and influenza, cocci have been present. It has occurred to me that such conditions as convulsive seizures in general paralysis might be due to the action of bacteria. I have found diplococci in one case of hæmatoma auris. In regard to conditions such as cellulitis, erysipelas, and fevers, which produce amelioration of psychoses, I have long been of opinion that the improvement is due to some circulatory toxin, and not to any counter-irritant action. As regards treatment, it is recommended by French observers that normal salt solution should be repeatedly injected to dilute the toxins and promote excretion. At the Italian Hospital in Constantinople a good result was obtained by the injection of antistreptococcic serum in a case of puerperal insanity. I should be disposed to try that in future.

Dr. MERCIER.—Toxæmia is the only agent which we certainly know will produce insanity: and it is not at all unlikely, I think, that eventually we shall find toxæmia at the bottom of every form of insanity. When we administer alcohol in sufficient quantity we render the person insane, and we find the degree of insanity is in proportion to the amount of alcohol administered. Dr. Mott has suggested that there are three agents—poison, stress, and heredity,—in every form of insanity. No one has taught more assiduously than I have the influence of heredity in insanity; but I would ask, as I have asked before, how it is that

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

heredity acts. It is exceedingly difficult to imagine that insanity is actually transmitted through the germ-plasm, or what it is that is transmitted from parent to child which appears as insanity in the offspring. Looking at the facts that the insanity produced by alcohol is practically identical in its mental and physical symptoms with the insanity of general paralysis, that certain cases of puerperal insanity are unquestionably due to sepsis, and that, while other cases are not known to be due to sepsis, yet the distinction in symptoms between the septic cases and those not known to be septic cannot be drawn; there is a presumption that the so-called aseptic cases are really septic, or at any rate toxæmic. Besides, as it does not necessarily follow that toxæmia shall be accompanied by pyrexia, it seems to me that we cannot in any case exclude toxæmia as a cause of existing insanity.

With regard to stress, I think that Dr. Mott would admit that it is only localising in its influence. That was practically his contention, regarding it not so much as a cause of insanity as of the way in which the insanity might manifest itself.

With regard to heredity, we used to think that consumption was an hereditary malady, and still the hereditary element is not eliminated. There are families more prone to be tuberculous than other families. It is undoubted that something is transmitted from parent to offspring which renders the offspring more liable; and yet we know that it is not tuberculosis which is inherited. Now, may not that be the case in insanity? May it not be that it is not insanity which is inherited; that it is not even nervous instability which is inherited? May it not be that what is transmitted from parent to child, in cases in which insanity occurs in both parent and offspring, is an inability to combat and eliminate the toxin? That might account for cases such as Dr. Savage has mentioned, in which the insanity or exaggerated delirium is liable to occur in persons who are unstable in nervous organisation. In regarding the causation of insanity we should not exclusively concentrate attention upon the nervous system, but should remember, as Sir Dyce Duckworth has indicated, that this is a question of general medicine. We must not wrap ourselves up too closely in our speciality; we should take wide views, and regard insanity as a malady, not of the brain alone, but of the whole man; it is a disease of the whole organism, and it can only be properly understood and properly dealt with when so regarded.

Dr. Briscoe having referred to the good results of treatment in cases of mental disorder dependent upon the accumulation of fæcal matter in the intestinal canal, by the administration of purgatives, pleaded for a systematic examination of the fæces, such as was usual in regard to the urine.

Sir Dyce Duckworth, in replying on the discussion, said, the criticisms which have been passed upon my address have been so kindly and gratifying that they have given me little to reply to. With regard to the element of stress, I take it that the effect of stress in determining the alighting of any toxic matter which may be the cause of insanity, is simply a condition producing a *locus minoris resistentiæ*. The same thing happens in other diseases, such as gout. Gout lies in a weak over-used part, the process is determined to that part as a *locus minoris resistentiæ*. Dr. Mott and Dr. Mercier opened up the vexed question of inheritance. That is a matter of enormous importance, and of very serious significance in medicine. It concerns us all deeply, whether it is the heredity of acquirement or the heredity of tendency. I think, in the meantime, it is safest to speak of inborn traits and conditions, and they were very well described by Dr. Mercier. I cannot quite take his view when he speaks of the quality of brain which is inherited being one which is feeble in the power of resisting attacks, just as we regard a person who is said to be of a consumptive inheritance as one who is specially vulnerable to the ravages of the tuberculous microbe. The same thing may be said with respect to rheumatism. Some people cannot be rheumatic, others cannot resist the toxin of rheumatism. Those are specialised peculiarities, personal peculiarities, and we may fairly conceive that those qualities of tissue may be passed on from parent to child.

I hope that in this matter of toxæmic insanity none of us will outrun the facts which justify the opinions expressed to-day. We must be careful not to say now that all insanity is toxæmic. It may be so, but we must not dogmatise too much.

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press

I think that we are by degrees building up a knowledge of the pathogenic nature of insanity, and that there is a chapter in psychological medicine in which toxæmia takes a very large part.

The Use and Abuse of Travel in the Treatment of Mental Disorders. A Paper read before the Medico-Psychological Association at the General Meeting, London, 21st November, 1900. By GEO. H. SAVAGE, M.D., F.R.C.P.

I need hardly apologise to you for my appearance once more before you as a reader of a paper, yet I think it well to give you my reasons for selecting this subject for to-day's discussion. For years past I have been feeling more and more strongly that travel as treatment was being carried too far, and having often in private expressed this feeling, I think it right to assert my belief here, fully recognising that I may be looking at the subject from a wrong standpoint, and being quite ready and willing to learn by the experience of others. I recognise in myself a tendency to believe in my own experience, and thus I may be warped.

First, I was struck by finding that not one class of neurotics, but all, I might almost say, indiscriminately were sent on voyages. This necessarily refers to those who were able to afford the luxury of travel, though often I saw people sent away who had to draw on their slender capital to provide the means. I seemed to see a double column with mental diseases written on one and travel on the other, after the fashion of the industrious but youthful hospital student, who, notebook in hand, follows a teacher and writes down the name of the disease from the bed-card, the name of the attending physician next, and the drugs prescribed last, thus taking it for granted that the *disease* was being treated, not a person. So my doubts grew apace, and I was keenly alive and on the look-out for the effects of these prolonged voyages; the result I now place before you.

The reasons for sending patients abroad may be summed up as follows:—Firstly, to get rid of them for a time. Most of us from life-long experience know the irksomeness of looking after persons who are suffering from the slighter forms of mental

https://doi.org/10.1192/bjp.47.197.226 Published online by Cambridge University Press