In conclusion, I should say that what is called general paralysis of the insane is a special form of brain disease, that it has a definite and regular course, with peculiar mental symptoms, which almost suffice to distinguish it from other forms of disease in which body and mind decay together. I have forborne to enter into a minute description of a disease only too familiar in our public asylums, because there are plenty of descriptions extant, though it must be remembered that it is only within the last twenty years that the materials for such experience have been accumulated in any quantity.

Asylum Notes on Scarlet Fever. By T. W. Mc Dowall, M.D. Edin., Assistant Physician, Inverness District Asylum.

In the "Journal of Mental Science" for April, 1863, there appeared a paper by Dr. W. Carmichael McIntosh, entitled "Asylum Notes on Typhoid Fever." In his introductory remarks, Dr. McIntosh notices the increased interest attached to the occurrence of physical diseases as observed in the insane, and the value of observations thereon, when the sane and insane suffer from the same disease and are under observation at the same time. There is then an opportunity of noticing the influence of such blood poisons as the scarlatinal and typhoid, as affecting two classes of the community; and as the patients are under medical observation from the very commencement of the illness, peculiar advantages are offered for a close investigation of all symptoms, mental and physical, from their first appearance. Dr. McIntosh further observes, "additional light might be thrown upon mental pathology and treatment, if such observations, sufficiently extensive, were correctly made and recorded. Alienists have long noted the influence of physical diseases in the course of an attack of insanity; and recently cases from foreign journals have been given by Dr. Arlidge, where recovery has followed wounds causing profuse suppuration in melancholia and general paralysis; scarlatina in suicidal melancholia; dysentery and acute rheumatism in monomania; dysentery and a compound fracture of the elbow in religious monomania; lastly, profuse intestinal hæmorrhage is mentioned by M. Baillarger, as ushering in recovery in a case of "painful hallucination of vision consequent upon injury from a railway accident." It is with the view of adding a few cases

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to those which have already appeared in the various journals that the following examples of insanity, with intercurrent scarlatina, are published; so that when a sufficient number have been recorded they may be collected for comparison and further examination, and it may be that some useful and interesting results may be obtained. For as we are in the habit of watching the effects of drugs introduced by ourselves in cases of insanity, in the hope that ultimately we may arrive at a scientific method for such medicinal treatment, there appears no reason why we should neglect, but rather the reverse, the observation of cases in which, through contagion, a specific blood poison has been introduced into the system, and which produces characteristic and obvious symptoms. In the present state of matters one would scarcely feel inclined or be justified to run the risk of exposing an insane patient to the poison of typhus or measles for the chance benefit which might result to the mental state; but it is not unreasonable to think that some day we shall be able to modify the course of many diseases, perhaps mental among the others, as we now do in the case of small-pox through vaccination.

The epidemic of scarlatina appeared in the Inverness District Asylum during November, 1869, and the disease was entirely confined to female patients and attendants, although several male patients suffered from a severe form of sore throat, so frequently observed during the prevalence of scarlet fever. Five patients, two attendants, and one housemaid were affected, and fortunately all made excellent recoveries. Although the matter was fully investigated at the time, no definite information could be obtained as to the probable means by which the disease was introduced into the asylum; but there are reasons for believing that the person who first showed symptoms of fever, a patient, received the germs of the disease through remaining in the visiting-room with her relatives for a considerable time, seeing that they came from a part of the country where scarlet fever was known to exist, though they denied the existence of the disease at home or in any house where they had lately visited. As is usual in such cases, the difficulties in obtaining absolutely reliable information as to the presence or absence of fever from the houses which attendants visit when on leave prevent a trustworthy conclusion being arrived at. Whenever the first case occurred immediate steps were taken to prevent the spread of the disease by at once removing her from her neighbours, and completely isolating her from the rest of the house; in fact,

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the method of "stamping out" the disease was adopted, and with moderate success.

The first person attacked was a female patient, C. F., æt. 20, who concealed her illness as long as possible. On 22nd November, however, she felt so ill that she was compelled to lie in bed. She stated that six days previously she had a severe shivering, and that since that time the same symptom had returned frequently, followed always by a severe burning sensation throughout the body; her appetite had gradually failed, and she had slept but little, her occasional snatches of sleep being disturbed with dreams, and quite unrefreshing. When examined on the 22nd November, the patient complained of pain throughout the body, severe headache, distressing sensation of throbbing in the cardiac region and in the head, great thirst, sleeplessness, severe pain in the throat, which was intensely congested and much swollen. Pulse, 140; temp. 103·5°. To shorten the description, it may be said that she had all the usual symptoms of an acute febrile attack, and she was treated accordingly. On the 24th November, a bright scarlet eruption was observed over the neck and chest, clearly indicating the true nature of the disease, had any doubt existed previously. Pulse, 150; temp. 104°. It is unnecessary to go fully into all the details of the symptoms as they appeared from day to day, suffice it to say that the case was one of a moderately mild type; convalescence set in on the 28th November, when the patient expressed herself as being much better, though the pulse still remained high, 146 per minute, and the sensation of pulsation in the chest, head, and neck proved most distressing to the patient, almost entirely preventing sleep. On the 29th November the pulse fell to 118, and the temperature in the axilla to 102·5°. Desquamation had appeared on the face, and at length affected the whole body. The treatment throughout the whole course of the disease was extremely simple, consisting of a gentle purgative at the commencement of the illness, and repeated occasionally as required; a simple febrifuge mixture of aq. ammon. acet. and camphor water, a solution of chlorate of potass as a drink to allay thirst, and the diligent application of heat to the throat by means of poultices applied frequently, and by the inhalation of steam.

In regard to the mental history of the preceding case, it may be stated that she was admitted into the Inverness District Asylum in May, 1868, suffering from mania of a very peculiar type. She was highly erotic in look, and behaved

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very indecently whenever she had an opportunity; she was filthy in conversation, and violent in word and action. Her delusions as to her bodily conformation were well marked, and these remain to the present day. She maintained that her whole body was empty; that she was a beast, and not like other people; that one half of her body was large and the other small; that it was not she who said these things, but a voice speaking through her, &c. When she said she was a beast, she mewed like a cat, and made other peculiar noises in corroboration of her statement. She also affected to act the part of the fine lady, complained of everything done to, or for her, would not condescend to work or walk with the other patients, indulged in frequent bursts of anger, often without the slightest provocation, and would end by assaulting all near her, smashing windows and tearing her clothes. Various forms of medicinal treatment were tried in this case for some months after admission, but without the slightest benefit, and at the time of her scarlatinal attack her mental condition remained very much as on admission, only the violent outbursts of passion and eroticism occurred at intervals of some weeks, or even two or three months, and alternated with periods of quiet and comparative decency. At such times her corporeal symptoms were very anomalous, and would generally be included under the name of hysterical. Much of her distress arose from menorrhagia and severe attacks of derangement of the digestion, but observation failed to trace any immediate connection between her various mental states and the morbid condition of her bodily organs. During her attack of fever, it may be said that her mental condition was such as had frequently been observed when the patient was in her best moods, and which had previously been present when she was confined to bed on account of her gastric derangement. She answered questions quietly and correctly, and behaved with the utmost propriety; in fact, she appeared too much engaged with her sore throat and other painful sensations to be inclined to indulge in her usual improper conduct and conversation. As she progressed towards recovery, she relapsed into her former mental state, and her conduct became so improper, and her conversation so indecent, that her neighbours complained; and had it not been for the fear of spreading the fever through the asylum, she would have been removed from the ward. It cannot be said that, in this instance, the scarlatinal fever poison exerted any specific influence upon her mental condition, for, as has

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already been stated, the same change had frequently been observed when she suffered from gastric derangement. The patient is still an inmate of the asylum, unchanged in either her bodily or mental health, and to this day she retains a lively recollection of her sufferings when ill of the fever.

The next to fall ill was an attendant, H. M., æt. 21, a strong and healthy girl, who had never been seriously ill during her life. She first felt unwell on the 21st November, having a severe headache, sore throat, urgent thirst, &c., and on the 24th she was quite unable to rise. She now came under medical observation, and being somewhat relieved after a gentle purgative and other treatment, she got up and attempted to go about her ordinary duties, but was sent to bed again immediately. By this time the eruption had appeared brilliantly on neck, shoulders, arms and chest. The pulse was 136; the temperature 102°. Appetite completely gone; tongue covered with a light white fur, except at the edges, which were red. The distress from pain in throat was very urgent, and the patient suffered much from want of sleep. It is needless to record all the physical symptoms as observed in this case; that has been done often enough elsewhere, and they may be summed up as those usually present in simple scarlet fever. Throughout the attack she was free from delirium, but, as already mentioned, suffered much from sleeplessness. She was greatly alarmed about her state, fearing much that she would die. After recovery, she stated that her mental distress from this constant fear of death was indeed very great, and that, though she tried earnestly to direct her thoughts in other directions by interesting herself in the movements of the nurse and other occurrences around her, her mind refused to be so engaged but for a few moments, and then returned to the gloomy meditations in which it had previously been occupied. She was thus haunted with a constant fear of death.

In 1866 I myself suffered from a severe attack of scarlatinal sore throat, followed by acute general dropsy, and I have still a vivid recollection of the miserable nights during that illness. All inclination to sleep was banished; the pain in the throat was intense, increased as it was by constant efforts to swallow, induced by the presence of a large quantity of thick mucus which lodged in the throat. The thoughts which chased one another in rapid succession through my mind were miserable enough; there was a vague feeling of terror, and dread of evil to come, but no special

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fear of death was present as in the preceding case. It cannot be said, however, that there is anything characteristic in such mental phenomena; they may be observed in most acute and many chronic and painful diseases.

The preceding case made an excellent recovery, and, as in that first recorded, the treatment was very simple, and in all essential points quite similar to that followed previously. The diet consisted of a good allowance of beef tea, milk, and such soft, nutritious food as the patient could swallow. In fact, in all the cases medicinal treatment was reduced to a minimum, and it may be said that they were allowed to run their own course, the patients being carefully watched during their illness and convalescence to prevent any chance of catching cold, and thereby running the risk of acute dropsy appearing, a much more serious event, as a rule, than an attack of simple scarlet fever. Fortunately all the cases escaped without such a complication.

On the 14th December, two new cases were admitted into the fever ward. One was a very strong, healthy girl, A. C., æt. 19, a housemaid; the other, a somewhat feeble creature, who had been an inmate of the asylum since July, 1867. The first of these, A. C., had never been ill in her life, and, like her fellow-servant, she was greatly alarmed about her condition, occasionally weeping and begging for her parents to be sent for, as she feared that, unless they came quickly, she would never see them in this life. Without her condition being actually dangerous, her attack of fever was a very smart one, and it can scarcely be doubted that she increased her sufferings through attempting to conceal them by working about the house in her usual manner. When first examined, the eruption had appeared over the greater part of the body, and was very brilliant on the chest and shoulders. Her pulse was 135, and the temperature of the axilla 103·2°. On the nights of the 15th and 16th December she was slightly delirious, talking occasionally in a rambling manner, and at times she sat up in bed and motioned as if she intended to get out of it. On the 19th December, all the symptoms had much abated; her spirits had revived, and it was only necessary to observe the altered expression of the face to know that the patient felt better. In about a fortnight she was allowed to leave her bed; in a month longer she was sent home, and after a short holiday returned, having completely regained her former health and strength.

The patient admitted to the fever ward on 14th December

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(J. M., æt. 24) had been insane since April, 1867, and when admitted into the Inverness District Asylum in July, her condition was as follows :—She was pensive and prudish, seeming to retire from observation, yet evidently in such a way as to attract it. She boldly asserted her depression to be not insanity, but the natural result of the death of her lover from scarlet fever, and she sought sympathy by her tears and by a very natural expression of regret that she should have been sent here. After a fortnight or three weeks' residence, however, because for a time she had evidently been controlled by her change of circumstances, her tendencies manifested themselves strongly, and since that period they have occurred weekly, and generally on Sunday. Capricious, passionate, and irritable, she has broken out without cause, abused those around, wrought herself into a hysterical condition, and is generally seen with dishevelled hair and disordered dress, sobbing, and ready, even at a word, to break into ill-temper. At such moments her language is rash, her acts impulsive, and she has endeavoured to dart through a window, and attempted suicide by strangulation with her apron and her garter. Immediately before her attack of scarlet fever, her mental condition was as follows:—It would be almost impossible to describe the variability of this girl, who is rarely, if ever, seen in the same mood. At one time she is pleased and flattered by attention, smiles complacently when complimented, and walks off with an air of becoming dignity; the next moment, however, she may dash at those approaching her, attack them savagely, lift chairs or whatever is within her reach to hurl at them, and then break out into perfect torrents of abuse. Highly vain, she at one time is seen dressed with the utmost neatness, and decorated, perhaps, somewhat fantastically; at other times she is extremely untidy, and walks about with her dress in disorder and her hair dishevelled. In the excess of this vanity is, no doubt, to be sought the starting point of her extreme suspicion and belief that every one of the opposite sex who approaches her has designs upon her virtue. Associated with the same feelings are also the most prominent of her other delusions, viz., the recognition of those around her as persons whom she formerly met, and she has pointed out individuals whom she believed she had seen shut up with her in a closet in a poorhouse, and whom she evidently regards as nourishing designs for her ruin. It is to be remarked that her periods of excitement correspond with the interval preceding the appearance of the

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catamenia, or during its flow. It is interesting to notice in passing that the menstrual discharge is always accompanied by inflammation of the conjunctiva.

Immediately before her attack of scarlet fever, the patient was in one of her disagreeable moods, resenting all interference; but as her bodily sufferings increased, she became much more agreeable, and was much more easily managed than could have been expected; in fact, during her illness her mental state was as good, if not better, than it had been since her admission. She remembered that her lover had died of the same disease as she then suffered from, and she remarked, as a curious occurrence, that she should have become similarly affected. During her convalescence, and for many weeks afterwards, she continued quiet, agreeable, and cheerful, but gradually any favourable impression which her fever might be considered as having made on her mental symptoms disappeared, and she lapsed into her former state, and continues so at the present time.

On the 17th December, an attendant, M. S., æt. 24, showed all the premonitory symptoms of an attack of fever. She was, indeed, a very bad subject for any acute disease, being unnaturally stout for her age; besides, her mental constitution was not such as would comfort her during her illness, she being at all times impatient of suffering. The disease ran its usual course, and it would not have been necessary to mention this case at all, had it not been that, during the height of the fever, she became subject to a remarkable hallucination of sight. During the early morning she was sitting up in bed, steaming her throat, when, on suddenly turning her head to the door of her room, she saw an old and hideous woman enter and cautiously approach her bed. The attendant was naturally alarmed at such a visitor, and cried for the nurse, who had left the room but a few minutes before. The old woman carried her apron in her hand arranged as a bag, which appeared full of something. When she had come quite close up to the bed, to the intense alarm of the patient, she opened the apron and shook the contents over the bed and its occupant, and immediately slipped out of the room. To the eyes of the patient the bed clothes and her own person appeared covered with lice, and in the greatest distress she cried for the nurse, who, hurrying in to see what was wrong, was well abused for neglecting her duty in allowing such an abominable old woman to enter the asylum during the night. Though firmly assured that no woman had been there, and

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that the bed was free from all vermin, the patient lamented her case during the whole night, shedding many bitter tears. Towards day-break she fell asleep for a short time, and when she awakened the hallucination had disappeared, but the recollection of her midnight visitor was clear and vivid—indeed, painfully so, for she experienced some difficulty in persuading herself that the whole affair was the creation of her disturbed brain.

Another female attendant fell ill on the 19th December, but her case presented nothing of special interest, or worthy of record. She passed through the ordeal in safety, and made an excellent recovery.

The last case to be recorded occurred in a female patient, J. F., æt. 27. This is certainly the most interesting of all the cases, as here we have an example of marked mental disturbance during the attack of scarlet fever, and during her convalescence. The previous history of her case is shortly as follows:—When admitted into the Inverness District Asylum she was suffering from an acute attack of mania of five days' duration, caused, it was stated, by disappointment in love matters. Her first attack of insanity occurred when she was twenty years of age, and since that time she had one or two attacks, from which she speedily recovered, not requiring to be sent into an asylum. During the present attack, however, she was very noisy and troublesome at home, and her symptoms, as detailed in the medical certificates, would appear to indicate an acutely maniacal condition. Her bodily health was not good, the patient being markedly anæmic. Ten days after admission, the following note was made as to her condition:—"She appeared to make herself quite at home when admitted, and has been very industrious at all kinds of household work. Her conduct has been correct and orderly, and only on one occasion did she become troublesome to an attendant by demanding to be allowed to go home, and by attempting to take the keys from her. She has been rather reserved in conversation—at least to the medical officers, but she explained to the attendant that she had been badly used by the men to whom she had been engaged—one of them a minister and the other a butler in town. In a few days she became more communicative, and stated that she was engaged to be married to a certain reverend gentleman; that there had been no regular courtship, but he had simply intimated from the pulpit his intention of marrying her. She slept well at night until the 9th

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October, when she became very noisy and delusional. She imagined that she was in labour and about to be delivered of a child. She mistook the attendants for midwives, and begged them to attend her. During this supposed labour her sufferings must have been great, should we judge by the accompanying noise, for her cries were loud and frequent. Having failed to be delivered on the 9th October, she looks forward to the early birth of the child; but she does not at all times insist on this delusion, as she occasionally admits such fancies to be "nonsense."

From this time to her attack of fever her state was on the whole satisfactory, and nothing more was heard of marriages or births. On the 12th of December it was noted that the patient had been very dull and depressed for two days, but this was attributed to her being then "unwell." On that day, however, she complained of pain in the throat, which was found to be highly congested. Her pulse was 100; temperature, 101°. She refused to give any information as to her condition, would not allow an inspection of her chest, covered herself up in the bedclothes, and ordered every one to leave her. Next day she was no better, and would allow no medical examination, not even her pulse to be counted. That she was ill was evident from her appearance, and besides, there was a slight scarlet rash visible on the face. Her throat was so sore that she was quite unable to swallow. She refused to answer any questions as to her bodily sufferings, but spoke in an exceedingly unnatural manner of her father, against whom she expressed the utmost hatred for sending her to an asylum. This state of perverted affection continued until the 17th December, when it disappeared, and the patient appeared much ashamed at what she had said. With this mental improvement there also appeared decided relief from bodily suffering. She also answered questions as to her state, and admitted that a scarlet rash had appeared on the chest and other parts. All doubt as to this matter was subsequently put an end to by the appearance of desquamation of the cuticle. During the night of the 17th she did not sleep, but was more or less excited; laughed, talked, and joked in an unseemly manner, and when visited by the medical officers she was very indecent. These variations in her moral character are interesting; the latter-mentioned perhaps not so much, as it may have been caused by the bad example of one of her neighbours—the patient whose case is first recorded in this paper. Her attack of filial revolt corresponds somewhat to an occurrence mentioned

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by Dr. McIntosh in connection with one of his typhoid patients. He says—"During the early part of his convalescence he wrote his father a very sensible letter, in a clear and legible hand, an effort which he had not attempted for years previously. His feelings in regard to his mother were also changed at this time, and he was anxious to see her, whereas he had formerly shunned and abused her. His friends stated that he had an attack of scarlet fever some years ago, and that ever since his antipathy to his mother was marked." It is thus seen that in Dr. McIntosh's case the derangement of feeling was chronic, whereas in the present case it was transient. To conclude the history of this case, it may be stated that no medical treatment was possible; that the patient made an excellent recovery from her attack of fever, and in March, 1870, was discharged recovered from her mental derangement, and she has continued well since that time. Previous to her discharge her bodily health had decidedly improved under a prolonged course of iron.

As already mentioned, several cases of severe sore throat occurred among the patients and attendants in the asylum during the prevalence of scarlet fever. These, however, call for no special notice, as nothing unusual occurred in the mental or physical symptoms of those attacked. One or two of the patients were irritable enough, it must be confessed, but that is no unusual symptom in many diseases occurring in other than insane persons.

To speculate as to the ultimate cause of the various mental manifestations already recorded might be a very easy matter, but it certainly could not be profitable. The truth appears to be that in times gone past we have had little but speculation, fine hair splitting and ingenious hypothesis, in place of industrious and painful observation, by which alone progress can be made. Psychologists, until recent times, appear very much to have acted the part of the men who keenly discussed the colour of a chameleon; they neglected full observation, and thus arrived at but part of the truth.

I must express my obligation to Dr. Aitken, the Medical Superintendent, for his kindness in permitting me to utilise the information concerning the preceding cases, contained in the Case Books.

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