suffering from some form of toxæmia, it occurred to us that an intra-venous injection of normal saline solution might prove of benefit. The median basilic vein was accordingly opened, and 40 oz. of ·75 *per cent.* saline solution were run in. At the time of the injection, which was done in the morning, the leucocytes numbered 9,500. That same evening the number had risen to 15,400. She was a good deal better mentally, the excitement lessened, and she slept well. Next day her leucocytes had returned to 9,000. Five days later she was again transfused with 40 oz. of normal saline, and this time the leucocytes rose from 10,000 to 28,000. The leucocytosis was polymorphonuclear in type. As it was impossible to continue opening the patient's veins, the next injection, 70 oz. in amount, was given into the breast. The result was another slight mental improvement, accompanied by a leucocytosis of 13,400. On two subsequent occasions saline was again given by the breast, without any mental benefit, however, the leucocytosis being only slight in each case. Numerous injections of saline were given by the rectum throughout the patient's illness, but these never produced any effect on the leucocytes. The patient gradually lost strength, became extremely emaciated, and died on January 28th, 1912, the excitement continuing until the end.

To sum up: normal saline solution was given in three ways and with correspondingly varying results. When given intra-venously it produced a well-marked leucocytosis, when given subcutaneously the leucocytosis was slight, and when given by the bowel there was no leucocytosis. The degree of mental improvement produced bore a relation to the intensity of the leucocytosis.

I record this case in the hope that others, who may be adopting the treatment of cases of excitement by means of the injection of saline solution, will make further observations on the behaviour of the white blood-corpuscles.

Morphino-Mania with Suggested Visual Hallucinations. By P. J. DWYER, M.B., Assistant Medical Officer, Richmond Asylum, Dublin.

P. G—, æt. 40, admitted January 9th, 1912, on a charge of assault; had been a sailor for many years, during which period he contracted the morphia habit. Since 1884 he had been taking the drug, gradually arriving at the stage previous to admission, when he was taking 15 gr. a day. The largest dose he ever took was 15 gr., followed in an hour by 10 gr.

He was an emaciated, miserable specimen of a man on admission, quite cachectic, and positively a mosaic with needle punctures. So hard was his skin on portions of his body that a needle could not be driven in without breaking.

His pupils were very small and the right knee-jerk was exaggerated.

He told me that he had an old prescription for a small dose, which he got made up in different chemists' shops, thereby getting a goodly

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supply when he required it. He had about 20 gr. with him and a syringe.

Arising out of this, I certainly think that there should be a law prohibiting chemists from selling morphia in any form, unless on a prescription dated by the physician on the particular day of sale. Also I would suggest that the prescription should be stamped by the chemist first selling it, and that no other chemist should supply it on that particular prescription, unless under extraordinary circumstances. These precautions, I think, would speedily lessen this pernicious and, alas, too-fashionable habit nowadays.

To continue, our patient had persecutory delusions, and he had both auditory and visual hallucinations. Regarding the latter there is a point of great interest, namely that his wife had visual hallucinations and imparted them to him. I may add that she was not addicted to morphia.

He told me that whilst in his room he used to see pictures flying in through the window and going on the wall, and that there often appeared doors where there were no doors. The room often became dark, and he used to see an old woman there.

He admitted that he never saw these things, although he had had auditory hallucinations previously, till they were pointed out to him by his wife. At first he said he couldn't see anything but gradually he began to see them, and he firmly believed in them until a few months before discharge, when he lost both delusions and hallucinations. His wife, when interrogated, admitted having visual hallucinations. I suppose the explanation of the suggested visual hallucinations was that the patient's brain was in a condition of semi general disassociation of neuron groups, owing to their becoming highly resistive to nerve currents, and consequently suggestion was an easy accomplishment. The auditory hallucinations were probably explained by the toxic condition of the blood acting on the sensory tracts and cortical centres, thus causing a change in the neurons. Oxymorphine was the poison in question.

We started treating the patient by the slow method, as we had previously got such good results by using it, and also because it is certainly the more humane treatment. I believe that if we had tried the rapid method in this case, and in a previous one, both would have died from marasmus. During this treatment we tried to substitute hyoscine hydrobromide and dionin, but found they did not give good results. When the doses of morphia were becoming very small, we assisted the patient by giving him fairly large allowances of stimulants. The day after admission he got 10 gr. of morphia acetas, and the dose was lessened gradually until June 15th, when he merely got injections of normal saline solution flavoured with a very small amount of laudanum. This latter was added as patient used to taste it before injecting. He, of course, during all this time had both the morphinic euphoria and the feeling of desperate abandon some time before he got the injection. Strange to say, he always complained of being "cut" in his dose on a day when it was not so, and when "cut" he did not appear to notice it.

This slow method of treatment may be trying and tedious, but

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certainly in this case the end justified the means. He remained with us until September 19th, and worked very well and arduously, not feeling the want of the drug in any way whatsoever.

He confessed to his joy and thankfulness at being freed from a habit which at one time transported his mind into a land of dreams, and at another time plunged him into the depths of misery, abandon and despair.

Part II.—Reviews.

The Sixty-sixth Report of the Commissioners in Lunacy for England and Wales, 1911.

The *total number of certified insane persons* under care in England and Wales was on January 1st, 1912, 135,661, having increased by 2,504 in twelve months.

The *private class* numbered—males 4,816, females 6,320, both sexes 11,136, showing an increase of nearly 2·3 *per cent.* An examination of their distribution reveals a decrease in the number cared for in hospitals and licensed houses, which is more than balanced by the increased numbers (6·5 *per cent.*) in public asylums. About 2 *per cent.* of the latter cases annually arise by being transferred from the pauper class.

The *pauper class* comprised 123,400 cases, being males 57,455, females 65,945, or 91·0 *per cent.* of all the reported insane. Although this is 34 below the mean annual increase for the past ten years, it is 175 above the average annual increase for the five years, 1907–12. As regards distribution, there is a tendency to increased numbers cared for in asylums with a corresponding diminution in those for whom provision is made elsewhere.

The *criminal patients* numbered 1,125, being males 857, females 268—an increase of 3 *per cent.* males and 1·9 *per cent.* females during the twelve months. The number housed in county and borough asylums now amounts to 20 *per cent.* of the total number; last year it was 18·3 *per cent.* The regrettable association of criminal and the ordinary insane in public asylums not only continues but flourishes. When political strife will permit of the Mental Deficiency Bill or some such measure becoming law, perhaps more suitable housing will be found for the weak-minded criminal.

By the kindness of the Registrar-General the Commissioners have been able to make use of the results of the 1911 census in the preparation of such tables as II A, Appendix A, showing the *ratio of pauper insane to the population in the various administrative areas.* The ratio of pauper insane to the whole population was 3·41 per 1000, an increase of ·38 per 1000 in ten years. Some 19 administrative counties (out of 63) have a ratio above the mean for the whole population. London is the highest of these with 5·97, and Cardigan the lowest, being 4·01.

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