muscarinic receptors (M1–M5). There is little evidence to suggest that the involvement of central cholinergic pathways in the pathophysiology of depression can be ascribed to the M1 receptor. Thus, the finding by Gillin *et al* is not surprising but does not form a valid basis for dismissing the possibility that atropine may have antidepressant properties.

The question then arises as to the evidence that atropine may indeed have such therapeutic effects. Certainly, there is experimental and clinical evidence to suggest that agents affecting central cholinergic neurotransmission have a profound effect on mood (Janowsky & Overstreet, 1995). Recent work by our group (Cooney *et al*, 1997) using a neuroendocrine strategy supports the hypothesis that overactivity of these neuronal pathways occurs in depressive illness. The area has been advanced further by neuroimaging findings identifying elevation in brain choline (a precursor of acetylcholine) in depressed subjects, which is ameliorated by treatment with nefazodone (Charles *et al*, 1995). Renshaw *et al* (1997) found a relative decrease in choline in the basal ganglia of depressed subjects, highlighting the regional differences in the same neuronal pathways. Of interest, this was most marked in subjects who subsequently responded clinically to fluoxetine. That an abnormality identified in one neuronal system should serve as a marker for response to a drug that acts predominantly through another neurotransmitter system merely emphasises the folly of ascribing behavioural change to discrete neuronal systems, given the complexity of interconnectedness.

Atropine is an agent that has not specifically been subject to clinical evaluation as an antidepressant. It works on a neuronal system that is implicated in depression both directly and indirectly. The point about potential bias made by Moncrieff *et al* is an important one but caution may be needed in accepting their conclusions, as atropine may in fact be more active than placebo.

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One hundred years ago

The out-patient treatment of insanity in general hospitals

By Crochley Clapham, MD, Physician Superintendent, the Grange, Rotherham; Physician to the Royal Hospital, Sheffield

A certain amount of provision for the out-patient treatment of mental disease amongst paupers has been made at our large county asylums, and good work has been done, but there remains a large number of patients of the class slightly above paupers who decline to present themselves for treatment at an asylum and whom it is advisable to provide for elsewhere.

Dr. Henry Rayner (late Superintendent of Hanwell), Lecturer on Mental Diseases at St. Thomas's Hospital, London, has endeavoured to fill this gap by instituting an out-patient department for mental diseases at that hospital, and has advocated the establishment of similar departments at other public hospitals. Dr. Rayner commenced his work at St. Thomas's early in 1893, and I was induced, by his representations and by a paper which he read at the British Medical Association meeting held at Newcastle in that year, to set up a corresponding department at the Royal Hospital, Sheffield, with which I am connected as Honorary Physician.

The weekly Board of the hospital having sanctioned the proceeding, I started in the autumn of 1893 by putting up a notice in the out-patient waiting room to the effect that patients suffering from mental disorder would be seen at 1.30 p.m. every Tuesday, and that it was advisable that patients of this class should be accompanied by a near relation. The response to my notice was immediate and continuous, and for the last four years and a half cases of mental disease have never failed to present themselves on the day set apart by me for their treatment. During this period every form of insanity has passed under my notice at the hospital, and with very gratifying results.

The great object aimed at in the establishment of this department has been to get at the insane of the lower classes in the early stages of their malady, which are so much more amenable to treatment than the more advanced ones. To this end I spoke in my notice of mental disorder and not of insanity, as the latter term is singularly abhorrent to these people.

The first thing to determine, on a case presenting itself, is whether or no it is a suitable one for out-patient treatment, or whether it would be more properly dealt with inside an asylum, thus providing the poor with expert advice gratuitously on a most important point.

Where I have thought it advisable to recommend asylum care, I have always found the relatives ready to fall in with my suggestion, though previously, perhaps, averse to taking action in the matter. However, the great proportion of patients presenting themselves have proved suitable for out-patient treatment and home management.

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In the absence of such a department as I am describing, these patients would too frequently be put through a routine narcotic treatment, which might or might not be suited to the case; or, on the other hand, would receive no treatment whatever. Such as these are the cases which would be specially benefited by advice and treatment of an expert mental physician attached to the staff of a general hospital; and I am anxious to support Dr. Rayner's contention that such a physician should, wherever practicable, be attached to at least one hospital in each large town.

My own experience is that patients of this order readily avail themselves of the facilities afforded, and are brought at an early stage of their disease to the hospital consulting room, with, in many cases, eminently favourable results. Dr. Rayner, in a letter to me on this subject, says: "What strikes me with wonder is the ease with which arrest can be effected in these early stages." I can quite bear out this statement.

Another function of this department is to render aid in the supervision and after-care of patients discharged as convalescent from county asylums with their mental equilibrium still somewhat unstable.

REFERENCE

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The insane as out-patients

For five years Dr. Rayner has treated slight and incipient cases of insanity as out-patients at St. Thomas's Hospital, and we published last week a summary of a paper by Dr Crochley Clapham, who has adopted a similar course at the Royal Hospital, Sheffield. In both cases the departure has been markedly successful in the sense that the clinic has been well attended by the class of persons for whom it was established, and that it has been found practicable to treat them satisfactorily under these novel circumstances. The success of these experiments is a matter of very great importance, both to the public and to the profession. To the public it is important, because it enables the poorer classes to receive attention in the early stages of a mental malady, when as is well known the disorder is very much more amenable to treatment than when it is fully established. Even more important than this result is the formal assimilation of mental disorder to bodily malady by the treatment of the two in the same institution. The bane of alienism in the past has been its isolation from general medicine. So long as the treatment of mental disorder is restricted to separate institutions set apart for the purpose, so long will endure the foolish prejudice that a stigma of disgrace and of horror attaches to it; a prejudice which is the vestigial survival of the belief in demoniacal possession, and which, more than anything else, militates against successful treatment. From this prejudice results concealment, mystery, and denial; delay in recognition of facts; deception, partly wilful and partly involuntary, of the physican. So long as the study and treatment of insanity is excluded from general hospitals, so long will the proper comparison and co-ordination of the phenomena of mental disorder with the phenomena of bodily disease be obstructed and hindered; and so long will the recognition that the study and treatment of mental disorder is the highest province of the physician be delayed. To the student the value of an out-patient clinic of mental disorder will be very great. In the asylums to which he now resorts for demonstrations in this subject of his curriculum, he sees those fully developed cases only which he will so rarely be called upon to deal with in general practice. In the out-patient department he will see the malady in the same early stages in which it will often present itself to him in his actual work in which recognition is often very difficult, and in which recognition is always of the utmost importance. If we regard the matter from the point of view, not of usefulness in after-life but of advantage for the mere passing of examination, the advantage is equally striking. Instead of being restricted to a few formal demonstrations in the distractingly novel surroundings of a lunatic asylum, the student will have the advantage of being able to sit down quietly in his familiar out-patient department, and examine his patients at his leisure. On every ground – for the welfare of the patients themselves, for the education of public opinion, for the progress of alienism, and for the benefit of the student – we welcome the departure, and trust soon to see a department of mental disorder as invariable and necessary an adjunct to out-patient practice in every general hospital as is now the department of dermatology or ophthalmology.

REFERENCE

British Medical Journal, 30 April 1898, 1158–1159.

Researched by Henry Rollin, Emeritus Consultant Psychiatrist, Horton Hospital, Epsom, Surrey

Corrigenda

Kendler, K. S., Karkowski, L. M., Prescott, C. A., *et al*, *BJP*, 172, 268–272. The subtitle (p. 268) should read: "In all Swedish male–male twin pairs born 1926–1949". In the summary (p. 268), the Method should read: "We conducted a trivariate twin analysis of these three causes of registration in all male–male twin pairs of known zygosity born in Sweden, 1926–1949 (n=5177 twin pairs)."

Spence, S. A., Hirsch, S. R., Brooks, D. J., *et al*, *BJP*, 172, 316–323. Figure 1C (p. 319): the label "hypofrontal" should be attached to the pointer in the upper right quadrant of the bottom image (left dorsolateral prefrontal cortex, transverse section, subjects with schizophrenia at T1).

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