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REVIEW

Editor's choice: the best of 2011–2012

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Roger M Pinder

Editor-in-Chief, Neuropsychiatric Disease and Treatment, York, UK

There were three papers in *Neuropsychiatric Disease and Treatment* that attracted the most attention in the last year, all recording more than 10,000 hits since publication. Varying widely in subject matter, by far the most popular of the trio, with almost 30,000 hits, was a publication on a new physical method for treating psychiatric disorders, in this case bipolar disorder,[1] while publications on alcohol consumption and cognitive risk[2] and dietary treatment of attention deficit hyperactivity disorder (ADHD)[3] were in second and third place, respectively.

Physical methods for the management of neuropsychiatric disorders have a long history and predate both pharmacological and formal psychological treatments, with the possible exception of psychoanalysis. Currently available physical interventions were previously reviewed in the journal,[4] where it was concluded that many of them are useful additions to the neuropsychiatrist's therapeutic armamentarium. The radioelectric asymmetric conveyor is a new patented form of noninvasive brain stimulation, which has been used successfully to treat stress-related disorders, anxiety, and depression, while the current publication focused on the long-term treatment of bipolar patients who were already maintained on lithium.[1] Addition of the radioelectric asymmetric conveyor to the standard treatment protocol resulted in a marked improvement in the number of manic and depressive episodes and a reduction in hospitalizations over periods of up to 16 months. Controlled trials in other settings and in other types of psychiatric disorder are clearly needed to confirm these promising initial results. A comparison with transcranial magnetic stimulation is also in order. It would be particularly interesting to see whether the radioelectric asymmetric conveyor is effective in treatment-resistant patients who qualify for electroconvulsive therapy or for other invasive modalities, such as deep brain stimulation, vagal nerve stimulation, and neurosurgery.[4]

The effect of moderate alcohol consumption on cognitive risk has been a hot topic in recent years, not least in our sister journal, the *International Journal of Wine Research*.[5,6] In a much consulted paper in *Neuropsychiatric Disease and Treatment*, Neafsey and Collins[2] carried out a thorough examination of 143 papers describing the relationship between moderate consumption of alcohol and some aspects of cognition, identifying two groups of publications. Those from 1977–1997 comprised neurosychological evaluations of mostly younger subjects, and suggested that moderate drinking either impaired cognition or that there was little difference between drinkers and nondrinkers. Later studies examined mental status in mostly older individuals, and have overwhelm-

Correspondence: Roger M Pinder
2 St Wilfrid's Court, Monkgate,
York YO31 7UQ, UK
Tel +44 190 464 6684
Email roger.pinder@gmail.com

ingly concluded that moderate drinking either reduced or had no deleterious effect on the risk of cognitive impairment or dementia. Neafsey and Collins calculated a relative risk of 0.77 for dementia or cognitive decline when moderate drinkers were compared with nondrinkers in 74 studies in older individuals. Benefit was seen for light to moderate drinking in both genders and in all forms of dementia and cognitive impairment, while heavy drinking was associated with a higher risk. Wine appeared to be more beneficial than beer or spirits, but only a small number of studies distinguished between types of alcohol, some of which reported no difference. The level of risk reduction achieved by moderate drinking was comparable with that associated with other factors, such as the Mediterranean diet, leading Neafsey and Collins to conclude that "Overall, light to moderate drinking does not appear to impair cognition in younger subjects and actually seems to reduce the risk of dementia and cognitive decline in older subjects".

Diet plays an important role in many medical conditions, including neuropsychiatric disorders. Indeed, dietary treatments have been investigated formally in controlled clinical trials, for example, the use of fish oil and ω-3 polyunsaturated fatty acids in depression and schizophrenia.[7] Hinz et al[3] have attempted to increase the total number of neurotransmitter (serotonin and dopamine) molecules in the brains of children and adolescents with ADHD, in the belief that current treatments for ADHD like central nervous system stimulants have failed to enhance brain levels of serotonin and dopamine sufficiently. They gave 5-hydroxytryptophan and L-tyrosine, which are precursors of serotonin and dopamine, respectively, as well as a gamut of daily cofactors generally required for the synthesis of the monoamines, to 85 patients aged 4–18 years. Retrospective analysis of the first 8–10 weeks of dietary treatment suggested that 67% of participants achieved significant improvement in symptoms, with a further 10% improving after dosage adjustment on the basis of urine assays. Efficacy appeared to be comparable or superior to many prescription medications for ADHD. Clearly, prospective, controlled, and blinded studies are needed to evaluate more formally the benefits of a dietary approach to the treatment of ADHD.

Popularity does not necessarily go hand-in-hand with the intrinsic quality and ultimate value of a publication. However, the three important papers discussed here have each addressed hot topics in neuropsychiatry, ie, new physical and dietary methods of treating mental disorders and the cognitive effects of another dietary element, alcohol. Things will undoubtedly be different during the next year as fashions change and new challengers gather pace.

Disclosure

The author reports no conflict of interest in this work.

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