Expert opinion

L-tryptophan and the eosinophilia-myalgia syndrome

(Pharmacology and Therapeutics Bulletin (1990), 28, 37-38)

PHILIP J. COWEN, MRC Clinical Scientist, Honorary Consultant Psychiatrist, MRC Unit of Clinical Pharmacology and University Department of Psychiatry, Littlemore Hospital, Oxford OX4 4XN

Eosinophilia-myalgia syndrome (EMS) is an alarming illness, occasionally fatal, which is characterised by severe myalgia, arthralgia, fatigue and, it now appears, ingestion of L-tryptophan (Hertzman et al., 1990). At first sight this appears rather surprising because tryptophan is, of course, present in the normal diet, albeit in smaller quantities (about 750 mg daily), than that usually prescribed for the treatment of depression (about 3 g daily). Furthermore, L-tryptophan has been available in the UK for the treatment of depression for over 20 years without previous cases of EMS coming to light, despite the dramatic nature of the symptomatology. All this suggests that a contaminant in the preparation of synthetic L-tryptophan could be responsible for the development of EMS, a view strengthened by the resemblance of EMS to the toxic oil syndrome which was caused by contaminated olive oil.

Most L-tryptophan, including that for medicinal purposes, is produced by a few large chemical companies in Japan. Therefore, contamination at a single source could explain the widespread distribution of EMS and recent findings do, in fact, support this hypothesis (Slutsker et al., 1990). Hopefully, progress will soon be made in identifying the substance responsible, but at present the CSM believes that no source of manufactured tryptophan can be considered safe.

How should this affect psychiatric practice? The Drugs and Therapeutic Bulletin suggests, quite rightly, that we should remain vigilant for possible cases of EMS, because the syndrome can continue to evolve even after L-tryptophan treatment has been withdrawn. The diagnosis is confirmed by the presence of a very high blood eosinophil count (> 2,000 cells/ml) and this should be followed by specialist referral and a report to the CSM.

Is there still a place for L-tryptophan in the management of depression? The Drugs and Therapeutic Bulletin states incorrectly that “doctors can no longer prescribe L-tryptophan for depression” because preparations remain available on a named-patient basis. While it could not be maintained that L-tryptophan is an essential first-line drug treatment for the management of depression, its role in the treatment of severe resistant depression, in combination with other drug therapy, is a different matter. There is good evidence that L-tryptophan can potentiate the antidepressant effect of monoamine oxidase inhibitors (Coppen et al., 1963; Barker et al., 1987) and perhaps also that of combined lithium/clomipramine treatment (Hale et al., 1987). Reports have already appeared of serious depressive relapses where L-tryptophan has been withdrawn from combined lithium/monoamine oxidase inhibitor therapy (Ferrier et al., 1990). The management of such severely ill, treatment-resistant, depressed patients in the context of the unknown incidence of EMS poses a challenging clinical dilemma, in which the risk-benefit equation is rather more troubling than the CSM appear to have realised (Committee on Safety of Medicines, 1990).

References


A meeting was held at Royal Park Psychiatric Hospital in Melbourne, Australia on 2 March 1990 to celebrate the opening of a research ward at that hospital which commemorates the memory of Sir Aubrey Lewis. Sir Aubrey Lewis was an Adelaide-born psychiatrist who undertook his medical training in Australia before entering psychiatry. He trained in the USA, the Continent and Great Britain where he settled and became the major figure in the development of the Institute of Psychiatry and the principles of what came to be known as “Maudsley psychiatry” around the world.

The Aubrey Lewis Unit is a 22-bedded clinical research ward which is the pivotal component of the Australian National Health & Medical Research Council (NH & MRC) Schizophrenia Research Unit established in 1988. This Unit is co-directed by the organisers of the conference, Professor B. Singh and Dr D. Copolov from the Monash Department of Psychological Medicine and the Mental Health Research Institute of Victoria respectively, both of which are based at the Hospital.

The special guest at the meeting was Professor Michael Shepherd, Emeritus Professor of Epidemiological Psychiatry at the Institute of Psychiatry who presented the plenary lecture on the theme of “Sir Aubrey Lewis – An Australian Psychiatrist”. Professor Shepherd painted an evocative picture of the personality and characteristics of Sir Aubrey Lewis and then proceeded to describe the Adelaide in which Sir Aubrey Lewis grew up – a city which at the same period was home to a youthful Howard Florey and also Hugh Cairns. Each of these men were to achieve accolades in the United Kingdom, but only the latter two have been adequately acknowledged in the country of their birth.

Professor Shepherd highlighted Sir Aubrey’s scepticism as having its origins in Lewis’ Australian background, a theme that was picked up later in the meeting by another invited speaker, Professor Gordon Parker, Chairman of the Department of Psychiatry at New South Wales University and for nine years editor of the Australian & New Zealand Journal of Psychiatry. He discussed the tendency of Australians to be truculent and resistant to control.