Biomedical Update:

Supplement reduces medication need in bipolar disorder

Nutritional supplements can reduce or eliminate the need for medication in individuals with bipolar disorder, according to Canadian research. Bipolar disorder, or manic depression, sometimes co-occurs with autism.

Bonnie Kaplan and Steve Simpson conducted an open label study of 10 men between the ages of 20 and 46. For six months, the men received a supplement with 36 ingredients including vitamins, minerals, and additional antioxidant nutrients.

The researchers report that on average, study subjects' symptoms were reduced by more than half compared to the symptoms they experienced while on medication. Participants were able to reduce their medication use by about two-thirds.

"For some patients," the researchers say, "the supplement has entirely replaced their psychotropic medication and they have remained well." The only reported side effect is mild, temporary nausea.

Kaplan says, "I was skeptical at the outset of this study. However, the results are quite striking."

The researchers are currently undertaking a randomized, placebo-controlled trial of supplementation, which will include 100 subjects.

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UniSci Daily University Science News, October 9, 2000.

Antipsychotics a risk for dangerous clots

Venous thromboembolism occurs when abnormal blood clots form in veins, causing potentially fatal complications if the clots break off and travel to the lungs. A recent study published in *The Lancet* reports that antipsychotic drug use significantly increases the risk of venous thromboembolism in men and women under the age of 60.

In a group of more than 29,000 antipsychotic drug users, G. L. Zornberg and H. Jick identified 42 individuals with venous thromboembolism not due to other known causes. Comparing these subjects to 172 controls, the researchers found that current exposure to conventional antipsychotic drugs was associated with a seven-fold increase in the risk of venous thromboembolism.

"Low potency antipsychotic drugs such as chlorpromazine (Thorazine) and thioridazine (Mellaril) were more strongly associated with venous thromboembolism than were high potency antipsychotic drugs such as haloperidol," the researchers say. In an accompanying article, Victor Tapson urges physicians not to write off as "anxiety" such symptoms as chest pain or indigestion, as these can be symptomatic of venous thromboembolism.

In related research, Swedish researchers have linked 12 cases of venous thromboembolism, five of which were fatal, to the use of clozapine (Clozaril), an antipsychotic drug. In this study, as well as Zornberg's and Jick's, the likelihood of this side effect developing was greatest during the first few months of treatment.

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"Antipsychotic drug use and risk of first-time idiopathic venous thromboembolism: a case-control study," G. L. Zornberg and H. Jick, *The Lancet*, Vol. 356, No. 9237, October 7, 2000, pp. 1219-1223. Address: G. L. Zornberg, Boston Collaborative Drug Surveillance Program, Boston Univrsity School of Medicine, Lexington, MA 02421, zornberg@bu.edu.

—and—

"Thromboembolism, five deaths associated with clozapine use," *Reuters Medical News*, March 31, 2000.

—and—

"Risk of venous thromboembolism with use of antipsychotic drugs," Victor Tapson, *The Lancet*, Vol. 356, No. 9237, October 7, 2000, p. 1206.

HOXA1 gene variant linked to autism

Forty percent of individuals with autistic spectrum disorders carry an unusual variant of the HOXA1 gene, according to a new study by J. L. Ingram and colleagues.

HOXA1 plays an important role in early brain development, and prior research indicated that mice with mutations of HOXA1 or a related gene, HOXB1, exhibit some autistic-like problems.

The researchers say children who inherited the variant gene from their mothers were more likely to have autistic symptoms than those who inherited it from their fathers. They speculate that family members who carry the gene but are not autistic are protected by other genetic influences.

Ingram et al. note that only one severely affected subject in their study had two copies of the HOXA1 variant, suggesting that children with two copies may die before birth.

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"Discovery of allelic variants of HOXA1 and HOXB1: Genetic susceptibility ot autism spectrum disorders," J. L. Ingram, C. J. Stodgell, S. L. Hyman, D. A. Figlewicz, L. R. Weitkamp, and P. M. Rodier, *Teratology*, Vol. 62, No. 6, December 2000, pp. 393-405. Address: J. L. Ingram, Department of Obstetrics and Gynecology, University of Rochester School of Medicine and Dentistry, Rochester, NY 14642.

Catatonia risk factors investigated

Catatonic symptoms occur in a number of autistic individuals, and can necessitate hospitalization or cause severe problems for caretakers. A new study by British researchers suggests that well before the onset of catatonic features, autistic children who develop catatonia exhibit different behavior patterns than other autistic children.

Catatonia refers to a group of symptoms including:

- increasing slowness, both in movements and in speech.
- increased reliance on physical prompting to accomplish tasks.
- increased passivity and lack of motivation.
- difficulty in beginning and completing actions.

In addition, individuals with catatonia may "freeze" in certain postures, or exhibit eye rolling, tremors, or stiff posture. Agitated outbursts, increases in ritualistic behavior, and day/night reversal can also occur.

Lorna Wing and Amitta Shah studied 506 individuals with autistic spectrum disorders who were referred to a U.K. clinic. Seventeen percent of the subjects aged 15 or older exhibited severe exacerbation of catatonic features. (The researchers note that this figure is higher than would be expected in the general autistic population, because the clinic receives referrals for children with complex diagnostic problems.)

Wing and Shah note that symptoms of catatonia occurred more often in autistic individuals who had poor expressive language, and those who were very passive socially, than in other autistic subjects. "The tendency to passivity in social interaction seen in some individuals before the onset of catatonia," they speculate, "is, perhaps, a precursor of the lack of ability to initiate voluntary movement, which is typical of catatonia and parkinsonism." The onset of severe catatonic symptoms typically occurred between the ages of 10 and 19, and was often preceded by a period of extreme agitation or aggression.

Wing and Shah conclude, "It is important for clinicians to be aware of the possibility of catatonia when investigating reasons for deterioration in skills and behavior occurring in adolescents and adults with autistic spectrum disorders."

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"Catatonia in autistic spectrum disorders," Lorna Wing and Amitta Shah, *British Journal of Psychiatry*, Vol. 176, 2000, pp. 357-362. Address: Lorna Wing, Centre for Social and Communication Disorders, Elliot House, 113 Masons Hill, Bromley, Kent BR2 9HT, U.K.