BEHAVIOR

From the meeting in San Diego of the American Academy of Clinical Psychiatrists

Depression: Safer shock therapy . . .

Electroconvulsive therapy (ECT) has been used for 40 years to treat a variety of psychiatric problems in the United States, and it has been the subject of controversy for almost as long. Charges of misuse and overuse have been made, and seriously harmful side effects (especially loss of memory) have been documented. Despite its drawbacks, shock treatment is still the therapy of choice in certain cases of endogenous, or biologically caused, depression, and ways to make ECT safer and more effective were discussed at the recent AACP meeting.

"When patients are properly diagnosed, evaluated medically and selected carefully, ECT can provide safe, effective and even lifesaving treatment of severe depression," says Thomas A. Flanagan of San Diego. ECT, he says, should not be used to treat personality problems or problems that result from an inability to cope with everyday living. Even when it is used to treat endogenous depression, Flanagan warns, the therapist is taking a risk that the treatment won't work. This problem and a possible solution to it were discussed by Max Fink of the School of Medicine of the State University of New York at Stony Brook.

Fink says measurement of the body's production of adrenal cortical hormone may soon enable psychiatrists to better gauge the efficacy and required duration of ECT for endogenous depression. He bases this prediction on two lines of research. Clinical evidence suggests that depression is associated with a malfunction of the hormonal message system between the hypothalamus and the pituitary and adrenal glands. For example, as the symptoms of depression are relieved by ECT (or by antidepressant drugs), those functions under the control of the hypothalamic-pituitary axis (such as appetite, sleep patterns and sexual drive) return toward normal. In addition, research in the past several years has shown that the hormonal output of the outer layer of the adrenal gland is higher than normal in depressed patients. And this excess is not suppressed by administration of adrenal cortical products, as occurs in patients with other diseases who are treated with these products.

"Even more recently," says Fink, "we have found that patients who show clinical improvement with ECT—about 85 percent of all cases—can be divided into two categories, those in whom the excess cortisol secretion by the adrenal is eliminated, and those in whom it persists." In preliminary observations, he says, it has been found that in patients who become more cheerful and active, but whose adrenal glands remain stimulated, the relief of depression will be short-lived. Much of this research was conducted by Yiannis Papakostas, also of SUNY at Stony Brook. The tentative conclusion is that if the link between the hypothalamic-pituitary-adrenal axis and depression is substantiated by further research, the monitoring of cortisol production might be helpful in better defining disease states, in selecting patients most likely to benefit from ECT and in defining the end point of treatment.

and safer drug therapy

Even if ECT can be made safer and more effective, it is not likely to become a popular therapy. Flanagan, for example, is an ECT specialist, but only about 5 percent of his patients get ECT. Most patients find drug therapy more convenient and acceptable. And results of studies of a new drug may make drug therapy for depression even more acceptable. John P. Feighner of the University of California at San Diego reported results of a year-long, double-blind trial that compared a new antidepressant — trazodone — with the standard imipramine. He found "clear superiority in terms of safety and efficacy" for the compound, which is expected to be approved for sale (under the name Desyrel) early next year.

BIOMEDICINE

Pneumonia vaccine questioned

A recent report from the Centers for Disease Control casts a long shadow on the effectiveness of a vaccine against bacteria-caused pneumonia. The vaccine was highly touted as a pneumonia preventive when it was first marketed in 1978 following trials in healthy young adults that showed it 75 to 95 percent effective against the 14 most common pneumococcus bacteria.

Because bacterial pneumonias can be treated with antibiotics, the vaccine's main use has been for high risk groups of the ill or elderly. But when actual usage in high risk groups was studied, the vaccine provided essentially no protection for at-risk children two to 10 years old or for patients with conditions that predisposed them to pneumonia, according to a report by Claire V. Bloom and co-workers in the Sept. 3 NEW ENGLAND JOURNAL OF MEDICINE. The vaccine did prove 60 percent effective in persons older than 10 years of age.

"Our data, though based on a small number of isolates, suggest that the efficacy of the vaccine may be considerably less in children and in patients with underlying disease than in the generally healthy adults studied in prelicensure clinical trials," the researchers say.

"More trials should be done," says Bloom. "In the meantime, people who really have a high chance of getting pneumonia may as well get the vaccine; it won't do any harm. But practitioners should be aware that their vaccinated patients are not completely protected."

Bloom and her co-workers reached their conclusion after classifying the bacteria present in 35 vaccinated persons who came down with pneumonia, and in 392 unvaccinated pneumonia patients. The researchers compared the incidence of the 14 bacterial types included in the vaccine and, assuming an equal "rate of attack," calculated the vaccine's effectiveness.

Disagreeing is Robert Austrian of the University of Pennsylvania, who contends in an editorial that the rate of attack by different bacteria may vary in sick and healthy persons. He also points out that many of the children in the study could not have been expected to respond to the vaccine because of their illness. The 60 percent efficacy in adults is, he says, "promising."

Cancer outbreak goes unsolved

The high incidence of malignant melanoma in workers at the Lawrence Livermore Laboratory in Livermore, Calif. (SN: 5/3/80, p. 278), is still confounding researchers from the California State Department of Health Services, the Laboratory and its funding agency, the Department of Energy. Following a report last April that the incidence of melanoma among LLL workers was three to four times the incidence in surrounding counties, DOE called in a panel of experts to investigate the problem.

The experts have so far exonerated the lab. "Preliminary efforts to explain the excess have not succeeded so far in implicating any specific cause," the researchers wrote in a September memo to DOE. "The occupational safety, industrial hygiene, and medical programs in the Laboratory appear to be well conceived and well conducted." Unless and until a cause is found, the report recommends no protective health measures beyond the current program at LLL, which does weapons, energy and biomedical research.

One possibility was suggested by the researchers for the high incidence of the sometimes fatal form of skin cancer — "the particular characteristics in the work force," rather than risk factors in the workplace.

The good news for the 7,200 LLL workers is that a preliminary survey shows no apparent increase in leukemia or other malignancies. Meanwhile, the Laboratory is working on a plan for further study of the mysterious outbreak.