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## Three International Conferences Report on Alcoholism Research

### Tokyo: Metabolism

Three special lectures on alcohol metabolism were featured at the International Medical Symposium on Alcohol and Drug Dependence, held in Tokyo and Kyoto August 21-26. The conference was sponsored by the Japanese Medical Society of Alcohol Studies in cooperation with the International Council on Alcohol and Addictions.

C.S. Lieber of the Bronx VA Hospital and Mt. Sinai School of Medicine gave a special lecture on the hepatic and metabolic complications of alcoholism. For prevention he suggested a three-level screening: (1) detection of heavy drinkers based on elevation of plasma alpha amino-n-butyric acid, (2) detection of liver injury with necrosis and inflammation based on a rise of serum glutamic dehydrogenase activity, and (3) detection of alcoholics prone to develop cirrhosis by the finding of pericentral sclerosis in liver biopsy.

In another special lecture, J.-P. von Wartburg of Berne, Switzerland, asked whether sensitivity to alcohol is a pharmacogenetic problem. He proposed that individuals with an isoenzyme pattern containing much "atypical" subunit B<sub>2</sub> may attain higher peak levels of circulating acetaldehyde and therefore more often experience aversive effects after consuming alcohol in a way similar to the disulfiram-induced hypersensitivity. It is conceivable, he said, that people with different racial backgrounds have adapted socioculturally over the centuries to differential biological responses by modulating alcohol consumption.

Olaf Forsander of the Research Laboratories of the State Alcohol Monopoly of Finland, in the final special lecture, described the influence of ethanol metabolism in the liver. Other reports from the conference follow:

- W. Feuerlein et al. of the Max-Planck Institute for Psychiatry in Munich described a diagnostic instrument based on the NCA criteria for the diagnosis of alcoholism called the Munich Alcoholism Test (MAT) which consists of two parts: a 7-item physicians' assessment part and a 24-item self-assessment part. In a cross-validation study on 675

*(Continued on page 4)*

### Honolulu: Psychiatry

The VI World Congress of Psychiatry, held in Honolulu August 28-September 3, received worldwide attention for its vote to condemn the Soviet Union for its practice of treating political dissidents as mental patients. However, the main work of the Congress was scientific reports, and prominent among them were papers on alcoholism.

- Twin studies reporting on genetic differences in the response of the EEG to centrally acting drugs, especially alcohol, were reported by Peter Propping of the Institute of Human Genetics, Heidelberg, West Germany. The variability of the normal human resting EEG is nearly totally genetically determined. An ingested psychotropic drug therefore interacts with a genetically determined trait.

- The importance of time-place relationships in alcoholism treatment were stressed by George Deering, M.D., Michael Godkin, c.Ph.D., and Edward Mason, M.D., of the University of Massachusetts Medical School. By chronologically reconstructing an individual's previous TIME-PLACE interactions a patient will be better able to remember the positive place experiences, associated with feelings such as dignity, love, security, and confidence.

- Although the per capita alcohol consumption among the Chinese is rather high, social and psychiatric problems related to alcohol abuse and alcoholism are low, said Winston W. Shen, M.D., of Tulane University School of Medicine. The rarity of alcoholism among the Chinese may be due to the fact that alcohol consumption is integrated into the Chinese culture in a healthful way: solitary drinking is rare, alcohol is taken with large meals, alcoholic beverages are accepted as a food or medicine, public drunkenness is condemned. However, opium abuse is far more prevalent.

- Results from a pilot study using computerized tomography and psychometric performance to assess the brain of alcoholic patients indicate a high incidence of cerebral changes, said Hans Bergman, et al. of Karolinska Hospital, Stockholm.

- A significant number of crimes of vio-

*(Continued on page 3)*

### Dresden: Treatment

Many speakers from Eastern Europe presented significant work among the 100 papers on alcoholism given at the 23rd International Institute on the Prevention and Treatment of Alcoholism held at Dresden in East Germany June 6-10. The conference was sponsored by the International Council on Alcohol and Addictions.

- J. Morawski and S. Kownacki of Poland outlined the role of criminal law in combating alcoholism. Two groups of norms are significant: the first aimed at general prevention (penalties for violating standards of production, distribution, and consumption of alcoholic beverages and serving alcohol to minors), the second aimed at individual prevention (penalties for misdemeanors and crimes committed under the influence of alcohol).

- L. Kubicka and J. Skala of the Apollinaris Centre in Prague reported on a three-year follow-up study comparing six weeks with thirteen weeks in patient programs. At one-year follow-up the unmarried long-stay patients did better than the unmarried short-stay patients, whereas the difference between the married short- and long-stay patients was nonsignificant. Three-year follow-up results again showed no difference between the short- and long-stay groups in general, but the interaction effect of marital status and treatment duration was also observed, though to a smaller degree.

- Isam H. Sherbini described the Islamic experience of prohibition, which was not just a Quranic order but part of a comprehensive approach to remodeling society, based on religion, involving all aspects of everyday life. It was achieved mainly by teaching, preaching, and convincing every individual to participate in the change. He stressed the role of leaders setting standards of behavior by example; in today's society, this would mean conducting diplomacy and government without intoxicants.

- R. Teschke, A. Brand, and G. Strohmeyer of West Germany reported on studies with rats that showed that early alterations of the liver due to chronic alcohol consumption are associated with increased serum GGT ac-

*(Continued on page 3)*

## EDITORIAL

### Alcoholism and coronary heart disease

The report in the *New England Journal of Medicine* (August 25, 1977) of a prospective study of Japanese men living in Hawaii studied first in 1965-68 and followed for about ten years is of major importance to the alcoholism field. This work by Drs. Yano, Rhoads, and Kagan is the second such report (the first by Dr. Klatsky of Kaiser-Permanente) which has indicated a "protective" effect of moderate amounts of alcohol against the "hard" consequences of arteriosclerotic heart disease: myocardial infarction and death as compared to abstinent men and women.

These findings are welcome as an opportunity to reiterate the position that students of alcoholism have consistently taken but have less consistently been credited with: that despite opposing any drinking for people with alcoholism, they are not opposed to drinking per se, and not blind to scientific data, scientifically presented.

This study tends to show that at the heavy drinking end of the scale mortality and morbidity again increased, but the number of subjects admitting to heavy drinking was too small for firm conclusions. The parameters of the study were such that denial among active alcoholics, while it might have been present, would have been unlikely to materially distort the figures for the remaining sample. Thus we can take the conclusions seriously.

Of course, among alcoholics other cardiac pathologies such as cardiomyopathy and arrhythmias make the alcoholism the most pressing problem to treat, even if we did not consider the host of physical, psychological, and social morbidities which accompany them. We also must emphasize the need for an individual to be wary as to how he evaluates his own drinking—many alcoholics have believed they were "moderate" drinkers for years after their peers were convinced otherwise.

However, the study should not be used as a rationalization to encourage recovered alcoholics to return to drinking. There was no indication that lifelong teetotalers had different consequences from those who stopped drinking, but the clues seemed to be in the content of alpha-cholesterol as opposed to beta-cholesterol in the blood. It is this interaction we should endeavor to change.

Urgent effort is required to elucidate this, so that a regimen can be set up for recovered alcoholics to minimize their risk of myocardial infarction, while preserving their now universally acknowledged need for sobriety.

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PAN announces with deep regret the death of Milton Helpert, M.D., chief medical examiner of New York City for 20 years. Dr. Helpert was a loyal and active member of AMSA.

### Reports from AMSA-NCA Medical-Scientific sessions

(Continued from PAN, VOL. 12, No. 2)

- B. Tabakoff, Ph.D. and R.F. Ritzmann, Ph.D., University of Illinois Medical Center, Chicago, reported on work with ethanol, catecholamines, and tolerance. Activity of NE neurons in response to ethanol is more important during the establishment of tolerance than in the expression of T once it is established.

- The primary action of ethanol in the brain is exerted at the ribosomal level, and in studies reported by S. Tewari and E.P. Noble of the University of California, Irvine, effects of ethanol administration under acute and chronic conditions on protein synthesis showed that the incorporation of <sup>14</sup>C leucine was diminished.

- The alterations in catecholamine disposition in human alcohol withdrawal are secondary to compensatory central nervous system changes associated with chronic alcohol ingestion, said E.M. Sellers, M.D. et al. of the University of Toronto.

- C.L. De La Cruz, Jr., M.D., et al. of the College of Medicine and Dentistry of New Jersey showed in studies with mongrel dogs that acute ethanol use in chronic alcoholic animals further delays conduction and may be the basis for electrical instability of heart muscle.

- The contractile apparatus in heart muscle exposed to alcohol can generate maximal tension, but is deficient in its property to perform external work, said J.S.M. Sarma, Ph.D. et al. of Huntington Memorial Hospital, Pasadena, in reporting on studies with dogs. Therefore, alcohol can produce changes in contractile state of heart muscle in vitro without hemodynamic changes in vivo.

- Kenneth C. Mills, Ph.D., of the Center for Alcohol Studies, University of North Carolina, presented an animal model which focused on the gradually emerging behavioral components leading to maladaptive drinking in response to recurring environmental stressors. His data described the upward modulation of ethanol intake in the rat as a function of taste, calories, and intoxication from ethanol.

- In rat studies, maximal tolerance was obtained only with practice, said Edward J. Gallaher, Ph.D., and Ted A. Loomis, Ph.D., M.D., Stanford University. This supports the hypothesis that T is due to learning when a behavioral task is used to monitor T.

- Z. Amit, Ph.D., et al. of Concordia University, Montreal, presented data on

an attempt to extinguish the drinking of ethanol in rats by injections of dopamine beta hydroxylase. Ethanol-preferring rats forced to drink ethanol while receiving injections markedly decreased ethanol drinking when forced drinking and injections were terminated. This attenuation was observed in a free choice paradigm and was longlasting.

### Insulin used in alcoholic detoxification

A review of clinical experience, by George R. Maser, M.D., involving 620 consecutive alcoholic patients at the Shawnee Mission Center (Kansas) showed that none of the patients detoxified with intravenous regular insulin and 10% glucose developed delirium tremens or subsequent convulsions. Because the symptomatology of hypoglycemia and the non-drinking alcoholic is quite similar, and since insulin is an answer to diabetes and seems to be an answer to alcoholic detoxification, it may be inferred that these are related diseases. (*Kansas Medical Society Journal*, May 1977, pp. 228-229.)

## MEETINGS

NOVEMBER 30—Deadline for submission of papers for Fourth International Conference on Alcoholism and Drug Dependence, to be held in Liverpool, April 9-14, 1978. For more information, write The Conference Secretary, B15 The Temple, Dale Street, Liverpool L2 5 RU, England.

APRIL 28-MAY 3—National Alcoholism Forum, St. Louis, Mo. AMSA-RSA Medical-Scientific sessions starting April 30. Meetings at St. Louis Gateway Convention and Exhibition Center. For information, write Dr. Frank A. Seixas, NCA, 733 Third Avenue, New York City, NY 10017.

## BOOKS

**Alcoholism and Drug Dependence—A Multidisciplinary Approach.** Edited by J.S. Madden, R. Walker, and W.H. Kenyon. New York: Plenum Publishing Company, 1977. \$39.50.

The proceedings of the Third International conference on Alcoholism and Drug Dependence, held in Liverpool in 1976.

**The Rights of Alcoholics and Their Families.** New York: New York City Affiliate of National Council on Alcoholism, 1977. \$2.25. Order from NYC-NCA, 730 Fifth Avenue, New York, NY 10019.

The first handbook to cover the daily rights alcoholics have and don't have in such areas as divorce, contracts, marriage, wills, criminal law, confidentiality, immigration and citizenship, treatment, employment, health and life insurance, and so on.

# World Congress of Psychiatry Reports

(Continued from page 1)

ence are committed by individuals who are in attacks of psychomotor epilepsy precipitated by either drugs or alcohol, or both, according to George N. Thompson, M.D., University of California School of Medicine. The subjects were defendants charged with crimes of violence in which the clinical history appeared to indicate an episode of amnesia and psychomotor behavior.

- A five-year follow-up of psychiatric patients, including alcoholics, enrolled in an industrial occupational therapy program showed improvement in social and occupational adjustment on return to the community, said Siegfried Rost of the Psychiatric Rehabilitation Department of the Regional Hospital in Orebro, Sweden. At the Mellring Workshop, industrial occupational therapy is combined with physiotherapy, psychotherapy, and an organized aftercare system. The improvements among alcoholics exceeded those among other diagnoses.

- Data from the American Psychiatric Association Task Force on Suicide Prevention presented by Mathew Ross, M.D. of the University of California, Irvine, showed that physician suicide rates are higher than among matched populations; suicide among female physicians is higher than among male physicians, females in general populations, and even matched populations; there is a high incidence of psychiatric morbidity, alcoholism, and drug abuse among physicians who commit suicide.

- In comparing alcohol use among opiate addicts in Iran and the United States, M.A. Shamie, M.D. et al. of the National Iranian Society for Rehabilitation of the Disabled found that 98% of the American addicts used alcohol, with 40% having severe problems, while only 23% of the Iranian addicts used alcohol. Religious and social vari-

ables probably account for the difference.

- A unique syndrome, found only in the region of La Paz, Bolivia, was reported by Cesar A. Fabiani, M.D. of La Paz, and Edward F. Foulks, M.D., of the University of Pennsylvania. The Bolivian alcoholic pseudotetany, known locally as "tis-ta-pis" or "shrinking," is a syndrome resembling tetany with painful spasms and fasciculations of the muscles of the upper limbs accompanied by intense fear and anxiety. It occurs in about 10% of chronic alcoholics as well as episodic heavy drinkers. Symptoms are relieved through the administration of intravenous Mg SO<sub>4</sub>.

- A study of the state criminal records and official registers of alcoholics in Sweden were used in a study of 2,000 adoptees born between 1930 and 1949. The results, reported by Michael Bohman, M.D., of Umea University, Sweden, support the hypothesis that there is a genetic explanation for the development of alcoholism but not for the manifestation of criminality.

- Tests on alcoholic heroin addicts treated with disulfiram and methadone concurrently suggested no contraindications to this combined pharmacological treatment, said Charles V. Charuvastra, M.D., of the Brentwood VA Hospital in Los Angeles.

- Depot-neuroleptics, mainly fluphenazine and pipothiazine, are used in treatment of chronic alcoholism, P.A. Lambert of Chambery, France, reported. The injections are given every two, three, or four weeks, and the results are satisfactory and sometimes spectacular. However, Lambert underlined that the DN action is only part of a therapeutic program.

- Age is perhaps the most important determinant in the diagnosis of alcoholism, reported Demmie G. Mayfield, M.D. et al. of

Brown University Medical School. They studied psychiatric patients admitted to two Providence hospitals representing different delivery systems but having common staff. In the age range 19-24 only 20% of patients with alcohol problems were diagnosed alcoholic, while in the age range 55-64, 68% were diagnosed.

## Treatment, Diagnosis Reports from Dresden

(Continued from page 1)

activities, facilitating early detection of alcoholism and monitoring abstinence. Prolonged alcohol intake results in an induction of hepatic microsomal GGT activity which in turn may be responsible at least in part for the enhanced GGT activity observed in the serum.

- Using a novel 2 x 2 factorial experimental design in which four groups of subjects received alcohol and placebo in all possible permutations on two days, Laurens D. Young, M.D., of the Medical College of Wisconsin in Wauwatosa found that there were significant differences in state-dependent learning. There was a sizable loss of recall for like-state responses from the 24-hour to the 48-hour testing groups.

- Antonia D'Angelo of the United States described the development of a voluntary movement to meet the needs of the female alcoholic. NCA opened the first national "Office on Women" in March 1976 to build a permanent voluntary national constituency of women and to act as advocate for the special problems of women alcoholics.

- Several entryways to enlist the alcoholic into treatment were described by Frank A. Seixas, M.D., Medical Director of NCA. The physician may use the presence of physical alcohol-induced disease; a job can be used as a wedge to motivate treatment with the aid of formalized company programs and alcoholism counsellors; and the discovery of the fetal alcohol syndrome can be used to convince pregnant alcoholic women to give up alcohol to avoid giving birth to a defective baby.

- Marcus Grant of the United Kingdom pointed out that members of the helping professions involved in dealing with the problems of alcoholism can be potential public educators. In addition, two groups with special knowledge of alcohol problems could be more effectively used: those whose occupation places them at alcohol supply points such as bartenders, and the pool of successfully recovered alcoholics.

- Reviewing the history of the past twenty years, Charles P. Frazier of the Smithers Foundation concluded "controlled" drinking where alcoholism exists is a fallacy.

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# Further reports from Tokyo Medical Symposium

(Continued from page 1)

unselected in- and outpatients a validity of  $r = .94$  was obtained, and the reliability of the self-assessment part was  $r = .84$ .

• Taurine (2-aminoethanesulfonic acid) was tested by Shoji Saito, Masanori Akiyama, and Kazuhito Kawata of Nihon University School of Medicine in Tokyo to determine its ability to suppress an ethanol withdrawal convulsion. Using male ICR mice, the team found that the simultaneous injection of 80 mg/kg taurine was very effective and was associated with scarcely any convulsions in comparison to controls.

• Reporting on the problem of "alcoholic epilepsy," Hideo Yamane, M.D. et al. of the Kyoto Prefectural University of Medicine suggested that although in the majority of cases the syndrome is part of a withdrawal syndrome, there are still some unresolved questions about the relationship between alcohol and seizure. Whether alcohol can provoke a seizure has not yet been definitely demonstrated. He described one case in which a man developed epileptic seizures while drinking 900 ml of sake.

• Basketball introduced as a method for group recreation therapy in the Senogawa Hospital in Hiroshima resulted in increased strength after five to six months, according to Ichiro Tsukue, Takao Shohoji, and Kazuhiro Nakagawa. A group of male schizophrenics were introduced to a similar program for comparison. At the time the program was begun there was no statistical difference in physical build between the two groups but the alcoholics were superior in such items of basic physical strength as back muscle and grip strength, but inferior in agility. The alcoholics showed more recovery of coordination than the schizophrenics after basketball therapy.

• The Danshukai, or Japanese Alcoholics Abstinence Society, is a widespread organization formed in 1966. Its history was presented by H. Suwaki, M.D. of Okayama University Medical School. The society has no religious or political connections, and most members attend meetings with their wives. The activities are not anonymous, and the members have a close connection with a medical institution and a psychiatrist. Danshukai is based on a master-disciple relationship between the head of the society and its members, and is a hierarchical organization. A pseudo-familial organization, the members form a close-knit fraternity.

• Kimie Hatayama et al. of the Faculty of Medicine, Shinshu University, reported that the incidence of chronic alcoholic pancreatitis in Japan has increased four times in the past ten years. He described 46 cases, all but two of them males. The onset of the disease occurred at a mean age of 41, after 19 years of alcohol abuse. Diabetes was present in 50% of the cases examined.

• A two-year follow-up study of 38 non-cardiac alcohol addicts, 7 patients with alcoholic cardiomyopathy, and 22 control cases showed that ventricular dilatation and clinical heart failure were frequently abolished by prolonged abstinence from alcohol, but wall hypertrophy and myocardial dysfunction were apparently irreversible. The data were reported by Tadashi Koide et al. of the Faculty of Medicine, University of Tokyo.

• The effects of high and low levels of dietary thiamin, riboflavin, and niacin on voluntary alcohol consumption, ethanol elimination rate, and acetaldehyde in blood were studied in cross-bred rats by K. Eriksson, L. Pekkanen, and M. Rusi of the Research Laboratories of the Finnish State Alcohol Monopoly. Low thiamin tended to increase alcohol drinking, but not significantly, while high thiamin decreased it. Low niacin caused a smaller decrease. Riboflavin did not influence drinking markedly.

• Setsuo Komura of Shiga Medical College reported on pharmacological and behavioral studies on the interaction between alcohol and antianginal drugs in male rats and rabbits. The decrease in alcohol selection and the inhibition of alcohol and acetaldehyde elimination in rats were closely related to the decreased liver alcohol and acetaldehyde dehydrogenase activities in the presence of the five drugs studied.

• Alcoholism is a generally overlooked diagnosis, according to the data presented by W.E. Fann et al. of the Baylor College of Medicine. They administered a brief MAST test to randomly selected medical and surgical ward patients, to six NP wards, and for a two-week period to randomly selected persons seeking care. Among the results: on one surgical ward 42.8% showed MAST indications of alcoholism while only 16.7% were so indicated on the chart. Similar results were found in all groups except one medical ward.

## RESEARCH AND REVIEW

### Hypertension a risk for even moderate drinkers

A link between drinking and hypertension was found in a four-year study of nearly 84,000 California patients, members of the Kaiser-Permanente health care center. The study was conducted by a team of epidemiologists led by Arthur L. Klatsky, M.D. People who take even three drinks daily run a significantly higher risk of developing hypertension, the leading cause of strokes and heart disease. The three-drink threshold occurred no matter what type of alcoholic beverage was consumed. However, persons who took only one or two drinks a day did not show a higher rate of hypertension than non-drinkers, and the risk may even be lower. (*New England Journal of Medicine*, May 26, 1977.)

### Alcohol and blood lipids linked in cooperative study

Data from five study populations (Albany, Evans County, Framingham, Honolulu, and San Francisco) participating in the Cooperative Lipoprotein Phenotyping Study indicate strong relations between reported alcohol consumption and blood-lipids. Alcohol consumption was positively associated with high-density-lipoprotein cholesterol level in all populations, the lipid level appearing to be a graded response even over the low levels of alcohol consumption reported. Less strong but consistently negative correlations were found with low-density-lipoprotein cholesterol. Plasma-triglycerides showed a modest positive correlation with alcohol. (*The Lancet*, July 23, 1977, pp. 153-55.)

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