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Epidemiology and alcohol: Report from Seattle

Epidemiological studies of heavy drinkers in defined medical care systems are expected to show that alcohol is an important risk factor, particularly in cardiovascular diseases. Jacob A. Brody, M.D., former Chief of the Epidemiological and Special Studies Branch of NIAAA, told a special symposium on alcohol organized as part of the Society for Epidemiologic Research meetings held in Seattle June 15-17. Dr. Brody, who organized the symposium, pointed out that mortality among alcoholics is twice the expected. About half the deaths are from cardiovascular disease while less than 10% die from cirrhosis.

General population studies have not demonstrated important relationships between disease-specific outcomes and alcohol in spite of the large excess mortality among alcoholics, probably because there is a systematic underrepresentation of heavy drinkers in the basic samples and particularly in the sample available to follow-up.

- Drinking norms differ and affect the overall consumption of alcohol, said Ron Roizen of the University of California, Berkeley. In his study about 20% of the variance in drinking volume could be explained by different norms in 14 different drinking situations.

- Alcoholism is not a hopeless disease, and there is a relatively high rate (20-35%) of spontaneous remission, according to Marc A. Schuckit, M.D. of the University of Washington. Various approaches to treatment also affect remission rates. However, for the average alcoholic, the course is generally predictable: first serious life problems begin in the age range of 28-33, hospitalization (if it occurs) at age 40, and death at age 55.

- Paul C. Whitehead of the University of Western Ontario described alcohol problem prevention strategies associated with the so-called Canadian perspective: tax, a moratorium on further liberalization of alcohol control measures, and a public awareness gram.

- Ann P. Streissguth of the University of Washington reviewed the epidemiological perspective on the fetal alcohol syndrome.

Alcoholic liver disease compared in Ireland and America: Reports from Liver Disease Meetings in Chicago

Differences in the apparent severity of alcoholic liver disease in Ireland and the United States were among the many reports on alcohol and metabolism presented to the 28th Annual Meeting of the American Association for the Study of Liver Diseases held at Chicago November 1-2. In the cross-sectional prospective study undertaken simultaneously in Cincinnati, Ohio, and Dublin, Cork and Galway, Ireland, clinical data, alcohol consumption and diet were assessed by an international team led by A.M. Connell of the Department of Medicine, University Hospitals, Cincinnati, Ohio, and Ireland.

Controlled drinking: behavior therapy discussed at Uppsala

A comparison of two controlled drinking programs (one in which subjects learned to compute and monitor BAC on the basis of body weight, number of drinks, and time elapsed and drinking skills such as spacing drinks, refusing drinks, and environmental manipulation and a second in which the subjects learned, in addition, stress management techniques and assertion skills) showed that subjects in both programs significantly reduced their rate of drinking. However, according to Lynn Alden and Park O. Davidson of the University of British Columbia, who reported their results at the International Congress of Behaviour Therapy held in Uppsala, Sweden in August, there were no significant differences between the groups on reduction of alcohol consumption.

- Drug self-administration methods have proven to be the most effective methods for evaluating dependence liability of drugs, said Travis Thompson of the University of Minnesota. In recent years research with infrahuman subjects has revealed that these methods are among the best predictors of the dependence potential of narcotics and stimulants in man. This technology, growing out of laboratory operant principles, is one of a growing number of examples of extensions of the experimental analysis of behavior into the solution of significant human problems.

- N. Azrin of the Anna (Illinois) Mental Health Center described a community approach to alcoholism focusing on the social problems caused by excessive drinking. Two directions for research were suggested: (1) evaluate treatment progress not only by the

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The Clinical Score was much higher in the American patient study group (67 males and 30 females) than in the Irish group (55 males and 22 females). The overall Path-score (measuring fibrosis, regeneration, portal inflammation, fatty change, hepatocellular necrosis and piecemeal necrosis) was also higher among the Americans than the Irish. Significant correlations between alcohol consumption and pathological damage were more prominent in the Irish patients.

The Cincinnati study group consumed less food than their controls and correlations between dietary factors and pathological features were more significant in this group. Milk, animal fat, and protein were associated with less fibrosis, regeneration and fatty change.

Further reports from the conference follow:

- E. Baraona et al. of Bronx VA Hospital and Mount Sinai School of Medicine reported on rat studies showing that ethanol decreases intact liver microtubules, that this effect is prevented by inhibition of ethanol oxidation, and that the ethanol effect is reproduced by acetaldehyde.

- In a study of human livers, L. Biempica et al. of the Liver Research Center of Albert Einstein College of Medicine reported that liver contains a collagen that shares antigenic determinants with glomerular basement membrane collagen. This basement membrane collagen, with other types of collagen, increases in several conditions associated with liver fibrosis.

- On the other hand, alcohol rather than dietary abnormalities is responsible for the increased plasma AANB after chronic alcohol consumption, according to the latest studies by S. Shaw and C.S. Lieber. The rise is due, at least in part, to excess hepatic production possibly associated with decreased peripheral utilization.

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EDITORIAL

Some words from Dr. Bourne

The 2nd Southeastern Conference on alcoholism held at Atlanta early in December was a great success. Attendance was fixed at five hundred, mostly physicians, and many more had to be turned away during the two weeks before the conference for lack of room. This is beginning to show a change at least among some physicians in their interest and attitude towards alcoholism.

During the final day, Dr. Peter Bourne, White House consultant on alcoholism and drug abuse, talked of major concerns and developments in the field. He underscored the easy availability of marijuana and now of PCP. Asked about the effect of high taxation on availability of alcohol, he presented a position which must represent Administration opinion, that in our affluent society, the increase in taxation required to decrease alcohol availability would be so astronomical as to make it impractical—and that even if that were attempted, bootlegging would then circumvent it. Of course another possibility would be more use of other drugs.

Noting that National Health insurance legislation would become a fact during the coming year, he stated that inpatient rehabilitative treatment for alcoholism would indeed be covered, although the number of days covered would be a subject of negotiation. This is a welcome stand for those who have experienced the good results of inpatient rehabilitation in alcoholism treatment facilities, and have been concerned about the effect on policy of inadequate studies like the Rand Report which on the basis of its poor sampling and poor identification of patient needs, stated that any treatment setting produced the same results.

FAS

BOOKS

Alcohol-Related Disabilities. Edited by G. Edwards et al. Geneva: World Health Organization, 1977. Offset Publication No. 32.

This book describes drinking behaviors that lead to alcoholism or "the alcohol dependence syndrome."

AMA Manual on Alcoholism. Revised third edition. AMA Order Department (#OP 185) 535 North Dearborn Street, Chicago, IL 60610. \$2.50.

This newest edition incorporates recent research and clinical experience. Major chapters define alcoholism as a disease, explore physiological, psychological, and sociological factors; explain metabolism and pharmacology of alcohol, and provide material on diagnosis and treatment.

Wisconsin Meeting on Fetal Alcohol Syndrome Prevention

A one-day meeting on prevention of the fetal alcohol syndrome (FAS) was held in Madison, Wisconsin October 31, 1977, sponsored by the Wisconsin Council on Alcohol and other Drug Abuse and the Wisconsin Council on Developmental Disabilities. It was attended by over 320 workers in alcoholism treatment, obstetrical and pediatric care, and developmental disabilities. While most of the participants were from Wisconsin representatives were also sent by 5 neighboring states. The success of this meeting was the result of 8 months of planning by a joint panel chaired by Ms. Delores Niles, ACSW.

The morning session featured a presentation by Ann Streissguth, Ph.D., Associate Professor of Psychiatry and Child Development, University of Washington, Seattle on identification, evaluation and treatment of the child with FAS. Henry L. Rosett, M.D., Associate Professor of Psychiatry, Boston University School of Medicine then presented a paper on the identification and treatment of pregnant women who drink heavily, with health benefits for the infant.

The joint panel presented a report containing 11 specific objectives and recommendations toward the ultimate goal of greatly reducing the risk to the fetus caused by alcohol consumption during pregnancy.

Scholarships available at Smithers Alcoholism Center

Under terms of a 1977-78 grant from the Division of Alcoholism, New York State Department of Mental Hygiene, the Smithers Alcoholism Center of The Roosevelt Hospital is now offering licensed physicians practicing or living in New York State full or partial scholarships to its Physicians Training Program in Alcoholism.

These scholarship offerings are effective immediately and continue through June, 1978. The program is full-time, Monday through Friday, and is limited to six physicians per training period. The first training week begins the first Monday of each month.

Under terms of the grant, interns and residents of JCAH accredited hospitals in New York State may also undertake these programs. The program is creditable towards the AMA's Physicians Recognition Award in Category I (37½ hours per week completed). It is a component of the Postgraduate Courses in Clinical Medicine program of the College of Physicians and Surgeons, Columbia University, and is under the direction of LeClair Bissell, M.D.

Further information is available from George Sweeney, (212) 554-6725, Course Coordinator, Smithers Center-Roosevelt Hospital, 428 West 59 St., New York, N.Y. 10019.

MEETINGS

JANUARY 18-20, 1978—"Alcoholism: T Search for the Sources," part of North Carolina's Alcoholism Awareness Week, January 15-21, will be held at the Holiday Inn-Four Seasons, Greensboro, North Carolina. For information, contact John A. Ewing, M.D., Director, Center for Alcohol Studies, The University of North Carolina at Chapel Hill, Medical School Building, Wing B 207 H, Chapel Hill, NC 27514.

FEBRUARY 24-25, 1978—Alcoholism: The Medical Side, the second annual conference on alcoholism, will be held at the Regional Academic Health Center Auditorium, at Texas Tech University Health Sciences Center, El Paso, Texas. Speakers will include Stanley E. Gitlow, M.D., Joseph C. Schouler, Ph.D., M.D., and Frank A. Seixas, M.D. For more information, write Dr. Fathy S. Messiha, Program Chairman, Department of Pathology, Texas Tech University, School of Medicine, Lubbock, TX 79409.

MARCH 18-29—Cruising Medical Seminar on Alcoholism, presented by the Center for Alcohol Studies, University of North Carolina, in conjunction with the Continuing Medical Education Program of UNC School of Medicine, NCA, and the Caribbean Institute on Alcoholism. The cruise is designed to qualify under the 1976 tax reform act as a deductible foreign seminar and carries 36 hours AMA Category I CME credit. The TSS Fairwind will dock at 7 Caribbean ports. For information, contact John E. Ewing, M.D., Director, Center for Alcohol Studies, University of North Carolina, Medical School Building, Wing B 207 H, Chapel Hill, NC 27514.

APRIL 9-14—Fourth International Conference on Alcoholism and Drug Dependence, to be held in Liverpool, England. For more information, write The Conference Secretary, B15 The Temple, Dole Street, Liverpool L2 5 RU, England.

APRIL 16-20—First International Arctic Rim Conference on Alcohol Problems will be held at the University of Alaska in Fairbanks. Co-sponsored by International Council on Alcohol and Addictions and National Council on Alcoholism-Alaska Region. For more information, write Suzanne W. Perry, executive director, NCA-Alaska region, 4510 International Airport Road, Anchorage, AK 99502.

APRIL 28-MAY 3—National Alcoholism Forum, St. Louis, MO. AMSA-RSA Medical-Scientific sessions starting April 28. 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.

Further reports from Liver Disease meeting

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• The A/L ratio (AANB to leucine) may not be a specific marker for the detection and assessment of alcoholism, said J.L. Dinestage et al. of Massachusetts General Hospital and Harvard Medical School. They concluded that the A/L ratio may be elevated nonspecifically in nonalcoholic human liver disease and in acute experimental liver cell injury in animals. The ratio was not found necessarily elevated in chronic heavy alcoholics by the authors.

• Studies of collagen synthesis in CCl₄-treated rats for 7 weeks showed that enhanced collagen synthesis is maintained only during ongoing administration of the chemical. M. Ehrinpreis, M. Rojkind, and M.-A. Giambone of the Liver Research Center, Albert Einstein College of Medicine, reported that the persistence of elevated liver collagen suggests that liver collagenase may be the limiting factor in reversibility of liver fibrosis.

• G.C. Farrell, W.G.E. Cooksley, and L. W. Powell of the University of Queensland and Royal Brisbane Hospital, Australia, reported on studies indicating that the specific activities of hepatic drug metabolizing enzymes as measured in vitro are not rate limiting to drug metabolism. Aryl hydrocarbon hydroxylase and ethylmorphine demethylase are preferentially affected in qualitatively different ways by liver disease or drug ingestion, demonstrating functional heterogeneity of the human hepatic drug metabolizing system.

• Cirrhosis is apparently a disease of increasing affluence, said J.T. Galambos of Emory University. He reported data linking cirrhosis mortality rates and median family income. During the past four decades the annual expenditures for alcoholic beverages in the U.S. increased from \$3.2 billion to \$22.9 billion and during the same period,

cirrhosis mortality rates increased about 80% in whites and 170% in blacks. In addition to alcohol other factors may significantly affect the development of cirrhosis and while drinking is essential, extremes are not required for alcoholic cirrhosis.

• The studies of N. Kanagasundram, T. Chen, and C.M. Leevy of New Jersey Medical School document further the occurrence and significance of immune complexes in alcoholic hepatitis. Sequential studies indicate that both cell-mediated reactivity and AH immune complexes are characteristic of classic alcoholic hepatitis with liver cell necrosis and polymorphonuclear inflammation which is often associated with leukocytosis, low serum complement, and renal dysfunction. Liver cell necrosis with mononuclear inflammation represents a progressive or subsiding phase of this process.

• Gray scale ultrasonography may be a useful adjunctive test in the diagnosis of cirrhosis but it lacks the sensitivity and specificity to be a primary diagnostic tool, said S.K. Lemon, B.B. Gosink, and F.W. Scheible, of the VA Hospital, San Diego.

• Reviewing the comparative survivals of alcoholics versus nonalcoholics after distal splenorenal shunt, J.U. Levi et al. of the University of Miami School of Medicine concluded that continuing alcohol-induced liver injury is the most likely determinant of survival regardless of surgical therapy. The distal splenorenal shunt appears to be the most effective surgical procedure for stable cirrhotic patients who have bled significantly from gastroesophageal varices. The operative mortality is low and the probability of survival for six years is excellent.

• Alkaline phosphatase (AP) is a significant marker for common bile duct (CBD) stenosis in alcoholic pancreatitis, said G.

Littenberg, A. Afroudakis and N. Kaplowitz of Wadsworth VA Hospital, Los Angeles. Chronic CBD stenosis due to pancreatitis produces hepatic histologic features of large duct obstruction, including secondary biliary cirrhosis. Alcoholic hepatitis and duct stenosis both contribute to TAP elevation in patients with alcoholic pancreatitis.

• Abnormalities of the individual serum immunoglobulin subclasses in alcoholic liver disease may be due to different pathogenetic mechanisms, suggest W.C. Maddrey and J.K. Boitnott of the Johns Hopkins University School of Medicine. Their studies showing the correlation of serum IgG and to a lesser extent serum IgA, with CWHVP (corrected wedge hepatic venous pressure) further supports the concept that the development of collateral circulation due to portal hypertension allows antigens normally processed by the liver to be presented to the systemic lymphoid tissue and accounts in part for the elevations of these immunoglobulins.

• In studies of malnourished alcoholics, the provision of DNA precursors and catalysts continues to constitute the basic therapy for regenerative phases of alcoholic hepatitis, according to A. Mahal et al. of the New Jersey Medical School. Insulin and glucagon are not indicated in such patients since peripheral levels of these hormones are usually high despite severe pancreatitis with a reduced secretory rate, and endogenous insulin and glucagon transiently accumulate in patients with liver injury, thus providing basal needs for cell repair.

• A study undertaken to show the effects of disulfiram, an effective inhibitor of acetaldehyde dehydrogenases, on the effects of ethanol and acetaldehyde, by M.A. Rothschild, M. Oratz, and S.S. Schreiber of NYU Medical Center found that the disulfiram exerts its own metabolic effects but the underlying mechanisms are still unknown. Livers respond to the metabolism of ethanol and acetaldehyde differently, depending on the nutritional state of the liver.

• In further reports on baboon studies, M. Salaspuro and C.S. Lieber of the Bronx VA Hospital and Mount Sinai School of Medicine report that the ethanol elimination curve is nonlinear and the nonlinearity is augmented after chronic ethanol consumption. This is associated with diminished NAD dependent metabolic alterations despite acceleration of alcohol oxidation. The results suggest increased activity of a non-ADH pathway of ethanol metabolism after chronic alcohol consumption.

• Evidence for the secretion of an abnormal growth hormone in men with Laennec's cirrhosis was presented by D.H. Van Theil, et al. of the University of Pittsburgh. This disturbed growth hormone secretion may explain at least in part the increased incidence of diabetes mellitus in cirrhotic men.

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Behavior therapy: more from Uppsala

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amount of alcohol consumed but by vocational adjustment, marital and family adjustment and social activities, and (2) treat directly these social problems as a method of reducing the problem drinking.

- Contemporary behavior treatment, said Peter M. Miller, of Hilton Head Hospital, South Carolina, does not focus on a single entity behavior strategy such as aversion therapy, but consists of a more comprehensive approach. It emphasizes systematic training in behavioral alternatives to problem drinking (e.g., assertiveness, self-control, relaxation), rearranging consequences of drinking through contingency management and social systems engineering, and teaching controlled drinking skills as a preventive measure.

- Based on a pilot study, Iver Hand of the University of Hamburg suggests that behavioral outpatient group therapy can be an effective means of helping even severely disturbed obsessive-compulsive patients.

- According to Ralph L. Elkins of the VA Hospital, Augusta, Georgia, verbal aversion therapy (covert sensitization) to alcohol is a promising treatment. It pairs imaginary alcohol with verbally induced nausea. Fifteen of 22 subjects developed conditioned nausea, and a third of these were totally abstinent following discharge for periods ranging from five to 62 months. When the Rand Report remission criteria, which include normal drinking, were used, all the demand nausea subjects were considered to be in remission.

- Alcoholism is a frequent complication of methadone treatment, and is one of the few behaviors found to correlate with methadone treatment failure. Ira Liebson, George F. Bigelow, and Anthony Tommasello of Baltimore City Hospitals tested the efficacy of methadone to reinforce behavior incompatible with drinking—disulfiram ingestion. Methadone was dispensed to alcoholic narcotic addicts contingent on their ingesting disulfiram, and as a control patients were urged to take disulfiram but received methadone regardless of whether they took disulfiram. The reinforced disulfiram treatment was highly successful in controlling alcoholism, and may have resulted in a superior adjustment, as reflected in arrest rate and employment.

- The essential feature of most behavioral theories of addiction is that substance abuse is viewed as an instrumental act which is maintained by extrinsic reinforcers such as anxiety reduction or peer approval. Instead, suggests S.H. Lovibond of the University of New South Wales, a more fruitful starting point for further work at the theoretical and applied levels might be a modified process model of addiction, which emphasizes intrinsic reinforcement.

- Makram Samaan of California State University, Sacramento, described a comprehensive behavioral program for treatment of alcoholic behavior which includes hypno-behavioral conditioning, organic-chemical aversive conditioning, environmental and social reprogramming, cognitive and verbal reconditioning, emotional and social skills training, abstinence thinking, fantasy and verbal reprogramming, role playing and behavioral rehearsal of communication, assertive and interpersonal relations and sexual skills, conflict resolution, and parenting skills training. The program also includes contracts of approximate behaviors on the job, in recreation, and in the home with immediate and delayed reinforcers. This program has been successful in three cases, one with follow-up of three years.

- Alcoholic inpatients were significantly less assertive than a group of undergraduates studied by E.T. Strugis, C.L. Best, and K.S. Calhoun of the VA Hospital of Charleston and the University of Georgia. Alcoholics were divided into high and low assertive groups, and statistical comparisons indicated that the high assertive people were significantly more depressed, paranoid, anxious, extraverted, and susceptible to boredom than the low assertive group. The results offer support for the anxiety-reduction hypothesis of alcoholism for the low assertive group and for the stimulus-need hypothesis for the high assertive group.

Link between alcohol and violent death described to ADPA meeting in Detroit

Alcohol played a prominent role in the nearly 2,000 deaths presumed to be from unnatural causes studied from August 1974 to August 1975 by the Office of Chief Medical Examiner of New York City. The study, conducted under a NIAAA grant by Paul W. Haberman, M.B.A., and Michael Baden, M.D., showed that alcohol, more than any other drug, was present in postmortem chemical tests. A majority of the drowning, fire and motor vehicle driver victims had positive BACs, with substantial proportions having levels of 0.10% or more. Large proportions of other violent death victims also had large percentages of alcohol present. Material from the study was presented at the annual meeting of the Alcohol and Drug Problems Association (ADPA) held in Detroit September 25-29 and will appear in a book to be published by Oxford University Press next year.

Most attention at the ADPA meetings focused on organizational and policy issues in the alcoholism field. Ernest P. Noble, director of NIAAA, appealed to the participants for unity on goals and patience with funding problems. Particularly sharp debate centered around NIAAA's prevention approach, with H. Leonard Boche, outgoing president of ADPA, calling for a "responsible decision" approach as compared to NIAAA's "consumption/control" theory which focus on the agent, alcohol.

Scholarship for Rutgers Summer Physicians Institute

A. E. BENNETT SCHOLARSHIP FOR ALCOHOL STUDIES—June 25-July 14, 1978; tuition, room, board at physicians institute, Rutgers Center of Alcohol Studies, New Brunswick, N.J.; open to physicians, including medical students. Apply: American Medical Society on Alcoholism, 733 Third Avenue, New York, N.Y. 10017. The application deadline will be April 1, 1978.

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