

PHYSICIAN'S ALCOHOL NEWSLETTER

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ADVANCES IN ALCOHOLISM RESEARCH REPORTED AT LIVER DISEASE MEETINGS

Research reports on alcoholism and alcohol-related factors in liver disease were presented at the 21st Annual Meeting of the American Association for the Study of Liver Diseases held November 4-5, 1970, in Chicago. Following are some of the highlights of the meetings.

Rates of Ethanol Metabolism Decrease Following Withdrawal from Alcohol

The rates of ethanol disappearance from the blood and the activities of the ethanol oxidizing enzymes were studied in 25 chronic alcoholics during ethanol ingestion and withdrawal to determine whether or not changes in the rates were accompanied by parallel changes in the activity of the enzymes. In the study, conducted by E. Mezey of the Baltimore City Hospitals and Johns Hopkins University School of Medicine, the patients, who had a history of recent alcohol intake and no overt clinical evidence of liver disease, were placed on a normal diet supplemented by ethanol for 3-5 days. A liver biopsy was obtained with assay of the two enzyme activities on liver homogenates. Repeat studies were performed on 12 patients after 1, 2, and 3 weeks of continuous hospitalization and abstinence from alcohol. Liver biopsies revealed various degrees of fatty infiltration in 24 patients and alcoholic hepatitis in 1. Follow-up biopsies showed decreases in fatty infiltration in all the patients. The mean rate of ethanol disappearance from the blood decreased from 19.7 ± 3.2 (SD) to 14.9 ± 0.5 mg/100 ml/hr ($p < .001$) within one week of discontinuation of ethanol. ADH increased during the 1st and 2nd week from 9.3 ± 3.2 to 19.0 ± 5.6 micromoles/mg protein/hr ($p < .001$), and decreased back to normal values in the 3rd week. According to Mezey, these findings suggest that the rates of ethanol disappearance from the blood are regulated by factors other than the absolute activities of the ethanol oxidizing enzymes.

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"Mini-Delusions" Trouble Alcoholics, Browne-Mayers Tells Eastern Psychiatric Research Meetings

Patients suffering from alcoholism and drug abuse may experience "mini-delusions"—that is, recurring false beliefs that alter behavior and thinking—reported Dr. A. N. Browne-Mayers and a team of psychiatrists from The New York Hospital, Cornell University Medical College in White Plains to the 15th Annual Meeting of the Eastern Psychiatric Research Association. The theme of the meeting, which was held in New York City on November 7-8, was "Drug Abuse: Current Concepts and Research." Dr. Browne-Mayers said that even though the patient appears to achieve insight into the delusions, the erroneous belief will frequently reappear at a later time with all its original vigor. Mini-delusions are dependent upon psychodynamic forces within the individual patient and are also closely allied to denial mechanisms.

NAAAP ANNUAL MEETING DISCUSSES ALCOHOL AND ADDICTIONS

Addictions in their various forms were discussed by experts in many fields at the 21st Annual Meeting of the North American Association of Alcoholism Programs held in San Antonio, Texas, September 27-October 2, 1970.

In the Clinical Symposium, Daniel X. Freedman, M.D., Professor and Chairman of the Department of Psychiatry of the University of Chicago, discussed the growing problem of addiction in "The Great Stoned Age." Relating the abuse of alcohol and drugs to the larger problem of what society defines as acceptable behavior, he said that every society that uses drugs invents customs to regulate their use and purpose. The medical profession, which in a modern technological society is the only system considered capable of handling drugs, must thread its way carefully through the myriad and changing patterns of alcohol and drug abuse to determine why a particular person uses drugs, what it means to him, and how to help him learn new behaviors once he is off the drug.

In addition to the general sessions, special panel discussions were also held for various sections: Administration, Community Action, Education, Research and Training, Social Work, and Treatment Services. The host agency for the conference was the Texas Commission on Alcoholism.

In a series of about 50 addiction patients, mini-delusions were seen clearly at least five times. As an example, Dr. Browne-Mayers cited an alcoholism patient who complained that she had been taken off the debutante committee of the Junior League in her community. Investigation showed that she had never even been on such a committee. When she was given this information, she seemed to accept it as true, but a few weeks later, and then months later, she returned to her original recollection of the upsetting time "when they took me off the committee."

Mini-delusions characteristically are generally plausible and not bizarre. The emotion or the accompanying affect is generally within normal range. They do not occupy the whole spectrum of the patient's mental life. The conviction disappears completely at times, reappears in other cases, is denied in still others, and is frequently rationalized. The professional therapist may not realize he is listening to a mini-delusion because it is usually plausible and reasonable. Psychotherapy, group, individual, and milieu therapy have been the chief methods to deal with this phenomenon. Psychopharmacological agents, when tried, appear to exert little influence in overcoming this problem.

Fatalities Due to Alcoholism Are Under-Reported in New York

Michael M. Baden, M.D., Deputy Chief Medical Examiner of the City of New York, reported that deaths due to alcoholism are widely under-reported. In New York City last year, of the more than 6,000 deaths related to alcoholism,

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EDITORIAL

Exploding A Myth About Alcoholism

The study of alcoholism is confused by many misconceptions—often impressionistic statements from the untested experience of one man, copied without investigation until they become axioms, so encased in authority that to question them is heresy. Though it is difficult enough to gain a hearing for such heresies when they attack an undocumented pronouncement, it is even more courageous to call attention to the incorrectness of a myth which has been buttressed by "evidence."

For this reason it is refreshing to read Giuseppe Mastrangelo's essay, "Recent Developments in the Struggle against Alcoholism in Italy."* Mastrangelo says: "In Italy public opinion as a whole considers that there can be individual alcoholics, but that alcoholism does not exist as a national problem. This same belief is shared in other parts of the world by many persons who, in good faith, consider Italians as an example of sober people, whose general habit of drinking wine in preference to other spirits does not lead them to alcoholism. It must now be stated that this belief is without foundation, and common opinion on the sub-

ject does not correspond with the facts . . . (The) false belief (that alcoholism remains an insignificant phenomenon) has been shared by a number of foreign researchers, such as Sadon, Lolli, and Silverman, all of whom have been disproved by Perrin."

Tracing the increase of admissions of alcoholic psychoses to mental hospitals (from 900 in 1947 to 2,700 in 1962) and their percentage of all mental hospital admissions (4.4% in 1947 and 12% in 1962), and noting that the incidence of cirrhosis of the liver has increased at a similar rate, Mastrangelo deplors the effect of the notion that if one is Italian he is not likely to be alcoholic.

Unfortunately the force of Dr. Mastrangelo's argument is blunted by his failure either to quote or give a reference for Perrin's work, as well as by the very general nature of his statistics. However, he has made it clear that alcoholism is indeed a growing problem in Italy, and that we cannot consider Italians immune from the disease.

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* In *World Dialogue on Alcohol and Drug Dependence*. Elizabeth D. Whitney, editor, Beacon Press, Boston, 1970.

MEETINGS

JANUARY 25-28, 1971 — 38th Annual Meeting, National Association of Private Psychiatric Hospitals. Sonesta Beach Hotel, Key Biscayne, Florida. Information from NAPPH, 353 Broad Avenue, Leonia, N.J. 07605.

THURSDAY, JANUARY 28, 1971, 8:30 p.m. — AMSA meeting, featuring film "Eagleville—You're Not Alone." Discussants will be Howard D. Zucker, M.D., and Stuart E. Nichols, M.D. Hanger Amphitheater, Ninth Floor, College of Physicians and Surgeons, 630 W. 168th.

APRIL 27-29, 1971 — NCA National Meetings, Anaheim, Calif. Information from NCA, 2 Park Ave., New York City.

International Meetings planned for 1971: MAY—Vienna, Austria, Drug Dependence; JUNE—West Berlin, Alcoholism; OCTOBER 5-8—Dublin, Ireland, Alcoholism and Drug Dependence. For further information, contact Archer Tongue, Executive Director, International Council on Alcohol and Addictions, Case postale 140, 1001—Lausanne, Switzerland.

BOOK REVIEWS

The Prevention of Drinking Problems: Alcohol Control and Cultural Influences

By Rupert Wilkinson. New York: Oxford University Press, 1970. \$10

Condemning "vague utterances about 'alcohol education' and the 'need for research,'" Mr. Wilkinson, who was a research assistant to the Cooperative Commission on the Study of Alcoholism, proposes specific reforms to prevent drinking problems. Among his proposals, which make use of already existing cultural trends, are these: that big distillers consider marketing a low-proof alcoholic fruit drink and promote it for certain moderate drinking situations; that local authorities develop probationary "learning sessions" for youthful drinking offenders; that change be stimulated in the atmosphere and amenities of taverns.

Alcohol, Alcoholism and Drug Abuse:

A Review of VA Sponsored Research Projects and Published Articles, 1968-69.

Compiled by E. Holt Babbitt. Available from Department of Medicine and Surgery, Veterans Administration, Washington, D.C. 20420.

American Drinking Practices: A National Study of Drinking Behavior and Attitudes

By Don Cahalan, Ira H. Cisin, and Helen M. Crossley. Rutgers Center of Alcohol Studies, Monograph No. 6, 1970.

This volume presents the results of the work of the Social Research Group of The George Washington University.

Drug Abuse: Data and Debate

Edited by Paul H. Blachly, M.D. Springfield, Ill.: Charles C. Thomas, 1970. \$12.50. 322 pp.

A collection of papers presented at the Second Annual Western Institute of Drug Problems Summer School held at Portland State University, August 11-14, 1969.

Papers Presented at the 28th International Congress on Alcohol and Alcoholism, Public Health and Health Administration Section

Lausanne, Switzerland: International Council on Alcohol and Addictions, 1970.

A collection of papers presented at the 28th International Congress, held September 15-29, 1968, in Washington, D.C.

Proceedings of the Eleventh Annual Meeting of the American Association for Automotive Medicine

Edited by Arthur H. Keeney, M.D. Springfield, Ill.: Charles C. Thomas, 1970. 298 pp.

A collection of papers dealing with the pre-crash phase, analyzing causative mechanisms and advancing control measures. Alcohol is among the specific pre-crash factors brought under statistical analysis and correlation.

Drunken Comportment: A Social Explanation

By Craig MacAndrew and Robert B. Edgerton. Chicago: Aldine Publishing Company, 1970. 197 pp.

The authors argue that drunken comportment cannot be explained simply as a result of alcohol's effect upon the brain; instead, changes in behavior under the influence of alcohol are to be understood on the basis of social definitions of drunkenness as a state of reduced responsibility, or "time out." However they accept the deleterious effects of alcohol on sensorimotor capabilities.

RESEARCH and REVIEW

Alcoholism and Social Pathology among Urban American Indians

The widespread alcoholism among American Indians is not the result of any single factor, even the overwhelming poverty in which most of them live, says Gerard Littman, who worked for several years at the St. Augustine's Center for American Indians in Chicago. Rather, Littman believes, "different groups of Indians have formed different drinking patterns and . . . there are many reasons which underlie their drinking." He stresses psychodynamic factors as well as economic and cultural ones. Many of the cases seen at St. Augustine's showed an early disruption of the mother-child relationship, followed by distrustful withdrawal, persistent passive-dependent longings, frustrations, rage, ambivalent dependency relationships, and depressions. Alcohol provides an outlet for these tensions that does not carry any social stigma or moralistic reproval among Indians.

Among the several types of drinkers Littman has encountered are those who drink to: (1) cope with internal anxieties and depressions stemming from severe trauma in early childhood; (2) release repressed aggressions; (3) find a substitute outlet for aggression; (4) withdraw pain and conflict from acculturation pressures; (5) find a new identity (particularly adolescents); (6) be or become part of a group.

Treatment and rehabilitation are difficult, because of the variety of drinking patterns and the many reasons for excessive drinking. Furthermore, most Indian alcoholics may not wish to give up their excessive drinking for fear that life would become even more unbearable. Alcohol

for the Indian also serves as a form of symbolic resistance, enabling the individual or a group to assert its independence from a hostile, alien, and moralistic society.

AA has had relatively little success among American Indians, perhaps because of its emphasis on the alcoholic's need to admit his personal weakness. (*Journal of Public Health*, Vol. 60, No. 9, September 1970, pp. 1769-87)

Alcoholism Significant Factor in Honduran Mental Illness

Alcoholism was found to be a significant factor in a study of 419 outpatients and 227 inpatients admitted to the National Neuropsychiatric Hospital of Honduras, which is that country's only institution for the care of the mentally ill. Alcoholism was the primary diagnosis in 33% of the new admissions. Of the newly admitted male patients, 72% had a current or past history of chronic heavy drinking, but only 8% of the women had such a history. Many alcoholics underestimated the degree of alcohol abuse, compared with the comments of the persons accompanying them to the hospital. The correlation between alcoholism and a history of arrest or prison was statistically significant. The arrests were usually for public drunkenness, fights while intoxicated, and other direct consequences of alcoholism.

The study was directed by Richard W. Hudgins, M.D., from June to August 1967 under the auspices of the Pan American Health Organization and the Department of Psychiatry of Washington University. (*Journal of Public Health*, Vol. 60, No. 9, September 1970, pp. 1788-1085)

Adult Male Alcoholic More Successful in Treatment Than Teenage Drug Abuser

The well-motivated adult alcoholic who comes to a hospital for treatment has a much better chance of success than an adolescent drug abuser, say Charles P. Neumann, M.D., Medical Director, and John S. Tamerin, M.D., Director of Research of the Silver Hill Foundation, New Canaan, Conn. In a talk presented to the 22nd Institute on Hospital and Community Psychiatry held September 21-24, 1970, in Philadelphia, the authors outlined their observations concerning the differences between these two groups that they have found at Silver Hill, a private, non-profit psychiatric hospital.

The adult alcoholic who does well in treatment is self-referred; the more the pressure for referral resides within the individual, the greater the likelihood of a successful outcome. The average teenage drug abuser at Silver Hill, on the other hand, was forced to come by his parents because the alternative was jail. The adult alcoholic who is likely to improve recognizes that his drinking is a serious problem and accepts the personal relevance of the problem for himself. At the other extreme the adolescent drug abuser neither accepts the problem of drugs in general or the personal relevance of the problem to himself.

The alcoholics who do best in treatment are those who have a history of considerable independence and the economic pressure of others dependent on them. In contrast is the teenage addict who has always been dependent on his parents. In this sense, the dependent female alcoholic is similar to the teenage addict, and is generally less successful than the male alcoholic who is economically responsible for his family.

The alcoholics who responded in treatment generally have had a history of accomplishment or achievement, which the majority of teenage addicts have never experienced. By using drugs, the teenager joins a subculture which defies the standard cultural framework and avoids the status conflict.

The adult alcoholic is usually able to perceive the therapist as an ally and to form a meaningful alliance with him. He enters into an implicit contract with his therapist to work toward changing the addictive aspects of his personality. The teenage drug abuser rarely enters into this form of therapeutic contract. The "generation gap," in which the alcoholics have shared common experiences with the therapists, works in favor of the alcoholic but against the addicted adolescent.

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Alco-Calculator Helps Social Drinkers Know Limits for Alcohol

"If you drink, don't drive" is unrealistic advice, says Dr. Leon Greenberg, executive director of laboratory research at the Rutgers Center of Alcohol Studies. The real problem, he says, is "knowing your limits," and he has developed a device called the Alco-Calculator designed to help moderate drinkers achieve this goal. It is a simple slide rule that uses data about body weight, number of drinks and drinking time to help people decide whether they would be safe behind the wheel after consuming a known quantity of alcohol. For example, a couple arrives at a cocktail party and stays there four hours. He (190 lbs.) drinks four martinis; she (120 lbs.) drinks three. Who should drive home? He should, because his blood contains .04% alcohol, hers contained .06%. If they had left after only three hours (but with the same number of drinks), his blood would have contained more than the legal minimum of .05%. The Alco-Calculator is calibrated in terms of common beverages, with settings for martinis, 12-oz. bottles of beer; whiskeys of 80, 86, or 100 proof, and table (12%) and fortified (20%) wines.

Dr. Greenberg has assigned the right to the Alco-Calculator to Rutgers University. Neither he nor Rutgers sells the device for a profit, but it can be procured by mail for \$1.95 from the Rutgers Center of Alcohol Studies, New Brunswick, N.J. 08903.

AMSA-REGION VIII HOLDS MEETING IN COLORADO

Meeting in Colorado Springs in conjunction with the Colorado Medical Association, members of the AMSA-Region VIII heard a talk on September 26 by actress Mercedes McCambridge outlining the need for increased alcoholism research and treatment facilities. Following the meeting, the group visited the Emory John Brady Hospital in Colorado Springs which for the past 20 years has treated alcoholics. The treatment program was outlined by Richard L. Condé, M.D. Patients come both voluntarily and by Court commitment. After at least 18 hours of complete sobriety, Antabuse is administered twice weekly either while the patient is hospitalized or on an outpatient basis. The success of the program, which is somewhat costly and occasionally difficult to administer, has been due to the cooperation of local courts, police, public and private social agencies, and AA.

ANALECTIC DRUG SPEEDS REGRESSION OF ACUTE ALCOHOLIC PSYCHOSIS, BELGIAN TEAMS REPORT

The drug 2-pyrrolidoneacetamide, an analeptic, produces rapid regression of acute alcoholic psychosis, has a favorable effect on clinical symptoms in chronic alcoholism, and seems to improve intellectual efficiency, two separate teams of researchers have reported. The teams, which presented the results of their work at the 7th Congress of the Collegium Internationale Neuropharmacologicum in Prague, were led by Dr. R. de Buck of the Psychopharmacology Research Institute of Brugmann University Hospital, and Dr. M. Toscano of Institut Fond'Roy, both in Brussels.

Dr. de Buck noted that all acute signs disappeared within 24 hours in 20 out of 21 alcoholic patients, 17 of whom were hospitalized with delirium tremens. All received 1.5 Gm. of 2-pyrrolidoneacetamide intravenously on the day of admission, the same dosage intramuscularly during the next 3 to 5 days, and 2.4 Gm. thereafter. Much lower doses of psychosedatives were needed than when the drug was not given. Similarly, improvement was noted in 30 out of 40

chronic patients. Criteria were the drug-effect on psychic and physical asthenia, memory, intellectual weakening, anorexia, insomnia, bad temper, aggressiveness, and psychomotor excitement.

Dr. Toscano reported using somewhat higher dosages than those reported by Dr. de Buck in his study of 160 hospitalized patients, including 118 alcoholics and drug addicts. Dosages of 4 Gm. per day were maintained for 5 days in the alcoholics, and then individual maintenance dosages of between 400 and 2,000 mg. were given. Muscular incoordination, anorexia, disorientation, and confusion all showed improvement, he said. A highly significant lessening of anxiety was found in alcoholic and drug-dependent cases where anxiety was rooted in a neurosis of the obsessional or depressive type.

The drug's action is not that of a psycholeptic, which masks anxiety, but rather it appears to produce a strengthening of internal judgment and control of somatic manifestations.

Syrups Improve Condition of Advanced Cirrhotics

Syrups containing lactulose or sorbitol may help some patients with far-advanced cirrhosis to live a more normal life, although not necessarily a longer one, Henry Brown, M.D., and William V. McDermott Jr., M.D., of the Harvard Medical School reported to the Tenth Multidiscipline Research Forum at the AMA's 119th Annual Convention in Chicago. The sugars decrease hepatic encephalopathy in the cirrhotic patients, probably by cathartic effect and by lowering colon pH. In turn, blood levels of ammonia and other nitrogen-containing compounds absorbed from the colon are reduced.

Subjective improvement was noted in nine patients out of 20 (three died of liver disease early in the study, three others were uncooperative, the symptoms of three others were controlled with moderate protein restriction, and two additional patients are still being studied). Dr. Brown noted the difficulties in judging results because the evaluation is subjective. Nevertheless, he believes that these patients benefited from administration of either of the sugars, although "improvement in such a patient must be measured in weeks or months (not years)."

GITLOW ELECTED AMSA PRESIDENT

Stanley B. Gitlow, M.D., was elected President of the American Medical Society on Alcoholism at the business meeting held November 1-2, 1970, at the Eagleville (Penn.) Hospital and Rehabilitation Center. Other officers elected were: Vice-President, Marvin A. Block, M.D.; Secretary, Frank A. Seixas, M.D.; Treasurer, Percy E. Ryberg, M.D. The immediate past president is Ruth Fox, M.D. The Executive Board of Directors elected at the meeting consists of: LeClair Bissell, M.D.; Luther A. Cloud, M.D.; Vernelle Fox, M.D.; Ebbe C. Hoff, Ph.D., M.D.; James A. Knight, M.D.; David H. Knott, Ph.D., M.D.; Charles S. Lieber, M.D.; Stuart E. Nichols, M.D.; and Maxwell N. Weisman, M.D. Following the business meeting workshops were conducted by Frank A. Seixas, Stanley B. Gitlow, and LeClair Bissell.

Under the direction of Donald J. Ottenberg, M.D., Medical Director of the center, the participants in the meeting experienced the Eagleville program for alcoholics and drug addicts. (For a description of the Eagleville approach, see PAN, Vol. 5, No. 3, Summer 1970, p. 5.)

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Blood Clearance of Ethanol and Tolbutamide in Chronic Alcoholics

The blood removal rates of alcohol and tolbutamide and the liver enzymes at various times after alcohol withdrawal was studied in a group of six chronic alcoholics. The study was conducted at Lemuel Shattuck Hospital by M. N. Shah, B. A. Clancy, and F. L. Iber of Tufts University. The results showed that this group of alcoholics had both accelerated blood removal of alcohol and tolbutamide that decreased with hospitalization. The accelerated metabolism correlated closely with increased drug metabolizing enzymes in liver microsomes. The liver ADH levels did not correlate with the body removal of alcohol, indicating that other systems are responsible for this removal in man.

Tryptophan Inhibits Toxic Effect of Alcohol on Albumin Synthesis

According to research reported by M. A. Rothschild, M. Oratz, and S. S. Schreiber of New York University School of Medicine, the acute effects of alcohol on albumin production may be moderated or completely reversed by tryptophan. Furthermore, the chronic effects of alcohol on albumin synthesis may be rapidly removed if the alcohol is not present in the perfusing plasma. The authors studied albumin synthesis in isolated perfused rabbit liver. When the perfusate was enriched with 10mMolar tryptophan plus alcohol, albumin synthesis increased from the low level of 8 mg to 22 ± 2 mg/100g/2½ hours. While this pharmacologic dose of tryptophan did not return albumin synthesis to normal in all studies, the liver synthesized albumin at ½ or more of the normal rate.

Quantitative Morphologic Analysis of Ethanol Effect on Rat Liver

W. O. Dobbins III and H. J. Fallon of the George Washington University Medical Center in Washington, D.C., and the University of North Carolina School of Medicine described combined quantitative morphometric and biochemical analyses of ethanol effects upon rat liver. 24 rats were divided into three paired groups—chow control; chow and 25% ethanol in drinking water; and 25% ethanol in water and chow supplemented with 2% choline. After 35 days, a portion of liver was prepared for electron microscopy. Subjective analysis of electron micrographs failed to distinguish all controls from treated rats. Lineal analysis showed increased hepatic cell size ($p < .001$) and total volume of mito-

chondria, peroxisomes, lysosomes and lipid bodies in the rats fed chow and 25% ethanol in drinking water. All these changes were partially reversed by choline supplementation. The surface area of both smooth and rough ER membrane was reduced 50% in the ethanol-treated animals. This change was partially reversed by choline. Ethanol-induced increases in total liver P-lipid, lecithin, phosphatidyl ethanolamine, and microsomal P-lipid/mg. protein were largely reversed by choline. Aniline hydroxylase increased twofold in the ethanol treated rats when compared to control and threefold in the rats fed ethanol plus choline. Ethanol increased triglyceride content twofold and this was partially reversed by choline.

Alcoholic Cirrhosis without Portal Hypertension

Of 88 cirrhotic patients studied during the past four years at the Hôpital Saint-Luc and University of Montreal by a group led by André Viallet, five did not have portal hypertension. Clinically, all were remarkably similar. All were alcoholics with an enlarged liver, palpable 7 to 10 cm. below the costal margin. None had splenomegaly or ascites, three had angiomas. Liver function tests were either normal or near normal, but two patients had a history of jaundice following heavy drinking. Serum protein electrophoresis was normal. Trans-thoracic liver biopsy was performed in all and revealed typical features of cirrhosis. Alcoholic cirrhosis of the liver can therefore occur without hemodynamic or radiological signs of portal hypertension.

Ethanol Effects on Lipid Metabolism in Small Intestine

The effects of ethanol on lipid metabolism in the intestine of male albino rats were examined by S. P. Mistilis and R. K. Ockner of the University of California in San Francisco. The rats underwent cannulation of duodenum, bile duct and/or intestinal lumen with dyet, and were then given ethanol or isocaloric glucose intraduodenally over 8 hr. The results showed that ethanol absorption augments intestinal mucosal TG concentration and intestinal production of TG-rich lipoproteins. This increased delivery of endogenous intestinal lipoprotein to plasma contributes to ethanol-induced hyperlipidemia. The additional mucosal and lymph lipids are not derived from liver via bile. These findings indicate that the intestine participates in the ethanol-induced changes in the metabolism of nondietary lipids.

Lymphocyte Reactivity and Ethanol-Induced Liver Injury

Abnormalities in lymphocyte reactivity resulting from either immunologic or physicochemical alterations may be important in the development and/or perpetuation of ethanol-induced liver injury, according to a report presented by Michael F. Sorrell and Carroll M. Leevy of the New Jersey College of Medicine and the VA Hospital of East Orange, N.J. Previous studies had indicated that autologous liver homogenate in short-term lymphocyte cultures from patients with chronic active hepatitis or alcoholic hepatitis cause a 3 to 5-fold increase in lymphocyte transformation, interpreted as evidence of immunologic reactivity of the delayed hypersensitivity type. Investigations were then undertaken to determine the effect of the supra-addition of ethanol and acetaldehyde to such cultures. Lymphocyte cultures were obtained from control subjects and from patients with chronic active hepatitis or alcoholic hepatitis. One set of cultures without additions served as a control, phytohemagglutinin was added to a second set, autologous liver homogenate to a third, ethanol to a fourth, acetaldehyde to a fifth, and ethanol plus autologous liver homogenate to a sixth set. Control cultures in patients with chronic active hepatitis or alcoholic hepatitis exhibited a mean 5% transformation rate. Transformation increased to a mean of 21% with autologous liver and 17% with ethanol or acetaldehyde. These agents had no effect on lymphocytes from control subjects. After subsidence of alcoholic hepatitis, neither autologous liver nor ethanol increased lymphocyte transformation. In contrast, a 20% transformation rate was noted in such patients when a combination of autologous liver and ethanol was used.

Effects of Barbiturates on Ethanol Metabolism

Barbiturate treatment enhances both MEOS activity and blood ethanol disappearance when sufficient time elapses to allow the drug to be cleared from the blood before ethanol administration, reported C. S. Lieber and L. M. DeCarli of the Bronx VA Hospital and Mount Sinai School of Medicine. However, if the barbiturate is still present in the blood, inhibition of ethanol metabolism prevails over the inductive process. The study was conducted by injecting 42 female rats intraperitoneally for 4 days with either saline, PB (80 mg/kg/day) or the more rapidly metabolized hexobarbital (HB), 100 mg/kg/twice daily.

Alcohol Abuse Discussed at Eastern Psychiatric Research Meetings

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only 1,716 cases were so indicated on the death certificate. Two factors are responsible: fears of stigmatization and the nature of the death certificate. When an older alcoholic dies, his physician often lists another cause of death, such as heart disease, which is more acceptable to the family. Even when a diagnosis of cirrhosis is listed without including alcoholism, perhaps because the physician feels that alcoholism is implicit, this relationship is not understood by the statisticians, epidemiologists, and program planners who interpret the data. Last year 1,383 deaths were recorded as due to cirrhosis associated with alcoholism and 1,746 as due to cirrhosis not associated with alcoholism—patently misleading data, according to Dr. Baden.

Furthermore, the death certificate requires that when a chronic alcoholic dies in an automobile accident, the cause of death must be listed as the traumatic injuries received, without any provision for the contribution of alcoholism. Last year alcoholism was a significant factor in approximately 50% of all violent deaths in New York City, including automobile fatalities, homicides, and deaths due to narcotism, accidental falls, fires, and drownings. In none of these deaths was alcoholism indicated on the death certificate.

Alcohol Compared to Other Addictive Substances

Alcohol differs pharmacologically even from the other depressant drugs, reported Benjamin Kissin, M.D., Director of the Division of Alcoholism and Drug Dependence of the Downstate Medical Center in Brooklyn. Its rapid absorption process produces an almost immediate

effect, which is more similar to that of intravenously administered heroin than to orally administered barbiturates or tranquilizers. This may account in part for the universal popularity of ethanol. In addition, the pharmacologic action of alcohol differs from those of the other depressant drugs in that the disinhibiting effect is usually quicker and more marked.

Psychologically, alcohol may have a broader spectrum of effects than other drugs. The stimulants usually (but not always) stimulate. The hallucinogens cause perceptual and thinking disturbances. The depressants tend to relax. Alcohol can do all these things in different people and sometimes in the same person at different times. Consequently, the psychological effects of alcohol are probably less predictable than those of other drugs but by the same token are more varied and versatile.

The social patterns associated with alcoholism are radically different from those associated with heroin, barbiturates, or hallucinogens. The present legality of drinking as opposed to the illegality of other drug habits probably accounts in part for the differences. The interaction of the pharmacological, psychological, and social effects of alcohol in a particular person in a particular society accounts for the remainder of the differences.

Parameters Suggested for Comparative Addiction

Several parameters for comparing the differences and similarities of abused substances were suggested by Esra S. Petursson, M.D. of the Drug Addiction Research Unit of Manhattan State Hos-

pital. The parameters are: (1) toxicity; (2) temporary and permanent destructiveness to self; (3) temporary and permanent destructiveness to others; (4) incidence, prevalence, epidemic, and endemic character; (5) bloodstream and mental atmosphere sludging and deterioration, and its effect and relationship to environmental pollution; (6) the effect and interaction of the addiction with warfare and other chronic behavioral aberrations of mankind.

Multiple Drug Use Among University Students

Alcohol was the most commonly used drug in a sample of 7,000 students from ten undergraduate and three graduate campuses of a state university. Over 90% of the students surveyed used alcohol, reported Doris H. Milman, M.D., Associate Professor of Pediatric Psychiatry at the Downstate Medical Center in Brooklyn. The second most prevalent drug was marijuana, with which 33% of the undergraduates and 48% of the graduate students have had some experience. The survey showed a positive association between illicit drug usage and the use of alcohol for intoxication, as well as a positive association between cigarette smoking and illicit drug usage.

Measurement of Addiction Potential in Monkeys

In studies with the rhesus monkey, G. A. Denaue, Ph.D., Head of the Drug Abuse Division of the Southern Research Institute of Birmingham, Alabama, found that some, but not all, monkeys will voluntarily initiate and maintain a pattern of self-administration of alcohol, narcotic analgesics, barbiturates, cocaine and amphetamine.

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