# ALCOHOL NEWSLETTER

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## Alcohol Reports Stressed at Liver Disease Meetings

Three morphologic variations of alcoholic hyalin, two clinical trials of drug therapies, and one effect of ethanol on gluconeogenesis in the fatty liver—all these were among the many alcohol-related topics discussed at the 23rd Annual Meeting of the American Association for the Study of Liver Diseases held in Chicago October 31-November 1, 1972. Summaries of some of the reports follow:

## Ethanol Inhibits Gluconeogenesis in the Fatty Liver

To determine whether increased fat in the liver can be a metabolic resource, the livers of rats with dietary fatty livers were perfused with lactate or alanine, and gluconeogenesis measured before and

ter ethanol. Keith S. Henley and Earl G. Laughrey of the University of Michigan Medical School found that gluconeogenesis from alanine in the fatty liver, unlike the normal, did not increase after ethanol. In the fatty cirrhotic liver, gluconeogenesis from alanine virtually ceased after ethanol was added, mimicking the inhibition by ethanol of fatty acid-induced stimulation of gluconeogenesis seen in normal livers. This inhibition was partially reversed when the fat content of these cirrhotic livers was lowered by feeding a normal diet.

#### Morphologic Variants of Alcoholic Hyalin

In a study of liver biopsies obtained from 24 patients with alcoholic liver disease, the fibrillar structure characteristic of alcoholic hyalin (AH) was encountered in hepatocycles, ductular cells, and in benign and malignant hepatomas. The study was conducted by H. Yokoo et al. of the Department of Pathology, Northwestern University-McGraw Medical Center, Chicago.

Three distinct morphologic forms of AH were observed. Type I consisted of bundles of filaments in parallel arrays at often formed a whorled pattern.

ype II, the most common and most characteristic form of AH, consisted of networks of randomly oriented fibrils.

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## COMPARISON OF BLACK AND WHITE MALE ALCOHOLICS REVEALS SOME DIFFERENCES IN DRINKING PATTERNS

Black men start drinking at an earlier age than whites, show earlier signs of "loss of control" over drinking, and experience more hallucinations and convulsions, Jorge A. Viamontes, M.D., told a meeting of the Pan American Medical Association held in Miami in November. Reporting on a study conducted with Barbara J. Powell, Ph.D., at the Malcom Bliss Mental Health Center and Department of Psychiatry of the Washington University School of Medicine in St. Louis, Viamontes outlined the different patterns of drinking revealed in a comparative study of 100 black and 100 white male alcoholics hospitalized during a 6-month period in 1970.

#### Abstinence vs. Controlled Drinking: Which Goal?

The philosophy of total abstinence in the therapy of alcoholics was challenged at the symposium on Behavioral Approaches to the Treatment of Alcoholism at the 30th International Congress on Alcoholism and Drug Dependence held in Amsterdam, September 1972. Several participants illustrated how alcohol was incorporated in their treatment programs.

Dr. Edward Gottheil, Professor of Psychiatry, Jefferson Medical College, Philadelphia, presented a treatment modality in which patients were permitted to choose between drinking or not drinking within a controlled hospital environment. Patients who chose to drink during the first week of the program continued to do so throughout the four weeks in which drinking was allowed. Those selected as leaders by the patients were men who chose not to drink. On followup, alcoholics who experienced positive feelings while drinking did worse than the ones who found drinking unpleasant.

Dr. Irene Holloway, Adelaide, Australia, described a family therapy technique based on the assumption that the problem drinker is "just an ordinary person who wants to drink like anyone else but who has acquired maladaptive habits." Her patients were given freedom to drink but they were encouraged to accept the responsibility for their behavior while intoxicated. In family therapy sessions conducted in the patients' homes, they were not "humored" if they were drunk but treated as if they were sober. This, in the opinion of the investigator, per-

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Race and sex were the only factors considered in selecting the sample. Both groups were of a lower socioeconomic status, had about a ninth-grade education, and if employed, were engaged in unskilled or semi-skilled labor. Approximately twice as many of the blacks (28%) were single. The black group was about nine years younger than the whites, with an average age of 37.0 compared to 46.2 for the whites.

Blacks began drinking at the average age of 15.7 years, compared to 19.0 for the whites. Loss of control began approximately 13 to 14 years later for each group, or at the age of 28.5 for the blacks and 32.9 for the whites.

There was virtually no difference between the groups in terms of alcoholrelated arrests, with approximately half of each group reporting one or more arrests. However, the blacks reported getting into trouble over alcohol at an earlier age, which, together with their weaker family associations, may explain why they were seen in treatment earlier.

Blacks reported significantly higher rates of hallucinations and convulsions, but did not differ in terms of incidence of blackouts or d.t.'s. Genetic or cultural differences may be the cause. The high incidence of convulsions may be due to the increased vulnerability of the CNS. Also on the panel were Drs. Gilbert Corrigan, Nicholas Pace, Ruth Fox, and Frank Seixas, and Mr. Charles Frazier of the Smithers Foundation.

## Geriatric Patients Vulnerable to Alcoholism

Advanced age does not protect a patient from alcohol abuse; in fact, it may make him even more vulnerable, according to Dr. Frank A. Seixas, who partici-

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### EDITORIAL

#### New Publications Report on Alcoholism Field

Nowhere can the burgeoning interest in alcoholism can be gauged as dramatically as in the new publications and information services that are springing up to report on various aspects of the field.

Most formidable of the new arrivals is the National Clearinghouse for Alcoholism Information (NCALI), which will provide a variety of publications, abstract services, answers to individual questions, and material for public consumption (see story, page 2). Led by the capable Dr. Walter Graddick, and with the aid of computer banks and a sizable staff, NCALI should become a prime resource for researchers, alcoholism councils, and members of the helping professions in the field.

The Alcoholism and Drug Addiction Research Foundation in Toronto has also inaugurated a monthly publication called "The Journal." Using a newspaper format, it reports not only on the work of the Foundation but on news on alcoholism and drug addiction from all over the world.

Two somewhat smaller private ventures have also been started. The Alcoholism Digest provides abstracts, clues to getting grants, and a main interview with an important figure (the first one, of course, with Dr. Chafetz). The Alcoholism Report, started by a newspaper man and a public relations expert, contains the kind of material—like the centerfold of Newsweek or The Kiplinger Report—which is not duplicated elsewhere. This publication, written in a terse and readable style, will keep many feeling up to date on trends in funding, research, and treatment.

There will no doubt be others swelling the lists, and in time, being winnowed out. But we welcome these signs that a substantial cadre of alcoholism professionals is developing and that they are anxious for news.

Meanwhile, scientific journals like Science, The Annals of the New York Academy of Sciences, medical journals like The Annals of Internal Medicine, the American Journal of Psychiatry, and the JAMA, not to mention state medical journals and others, open their pages to articles on alcoholism. Nursing journals such as RN, The American Journal of Nursing, and others also find alcoholism news timely.

State programs, local alcoholism councils, and individual treatment centers and foundations like Melwood Farms, the Chit Chat Farm, and Vista Hill Foundation continue to publish their chatty and informative reports.

The Grapevine, organ of AA, not only helps its members through reporting unique stories of recovery but keeps abreast of material of interest to them.

The International Journal of the Addications includes material on alcoholism as well as on other drugs.

So far-and probably for the foreseeable future—the scholarly and comprehensive Quarterly Journal of Studies on Alcohol, with its carefully referreed articles, its massive abstract section, and its exquisitive editing by the legendary Mark Keller, will continue to be the reference volume of choice.

Physicians' Alcohol Newsletter is proud to be in this company, and will continue to bring its physician readers new valid scientific and medical reports—often on a prepublication basis—as well as complete reports of medical meetings and other news of major interest.

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## AMSA-VI, Psychoanalysts Hold Meetings

AMSA-Region VI members heard a varied program on alcohol research and treatment at a meeting held Nov. 27 in Rochester, Minnesota. The meeting was held in conjunction with the Minnesota Conference on Family Life in the World of Alcohol and Drugs, and was chaired by D. H. Petersen, M.D., of Willmar State Hospital, Willmar, Minn.

Dr. Jose Pozuelo spoke on the suppression of craving and other signs of morphine dependence in addicted monkeys by the use of AMPT, and Dr. Richard Heliman described his experiences in treating Vietnam veterans. The use of an alcoholism screening test in an alcohol treatment unit was discussed by Dr. Robert Morse.

Alcoholism treatment was the featured topic of a session of the 17th winter meetings of the American Academy of Psychoanalysis on "The Addictive Disorders." The meetings were held in New York, December 8-10, and Ronald D. Laing delivered the opening address.

The panel on alcoholism treatment was chaired by John M. Cotton, M.D., and featured talks by Ruth Fox, M.D. on multidisciplinary approaches to alcoholism; John A. Ewing, M.D., on an experimental approach to modify drinking behavior; and George Nicklin, M.D., on salvaging the intractable alcoholic by positive intrafamilial transference.

## **MEETINGS**

FEBRUARY 12, 1973—General Session on Alcoholism of the Convention of th Medical Society of the State of New York, Americana Hotel, New York City. "Alcoholism—The Doctors' Dilemma?" to be moderated by Stanley E. Gitlow, M.D. Speakers will include Drs. Ephraim T. Lisansky, LeClair Bissell, John Norris, Frank I. Iber, Luther Cloud and Thomas Jones. Information from Bernard J. Pisani, M.D., Chairman, Medical Society of the State of New York, 420 Lakeville Road, Lake Success, N.Y. 11040.

APRIL 1-5—International Conference on Alcoholism and Drug Dependence, Liverpool, England. Information from International Council on Alcohol and Addictions, Case Postale 140, 1001 Lausanne, Switzerland.

APRIL 3-4—Medical-Scientific Session of Annual Meeting of National Council on Alcoholism, Washington, D.C., entitled "The Person with Alcoholism." Information from NCA, 2 Park Avenue, New York 10016.

## BOOKS

Drugs, Alcohol, and Tobacco in Britain. By Jim Zacune and Celia Hensman. London: William Heinemann Medical Books Ltd., 1971. 239 pp. \$18.

A survey of the availability and misuse of drugs and alcohol, as well as treatment, education, research, and prevention.

## NIAAA Sets Up New Information Service

The National Clearinghouse for Alcohol Information (NCALI) has been created as part of the NIAAA to serve as a national focal point for the collection and dissemination of information on the subjects of alcohol and alcohol abuse. NCALI will reach a wide range of audiences, including physicians, researchers, counselors, alcoholics, and their families, and the general public.

Computer science and information services support will be provided by the General Electric Company, which was awarded a \$993,000 one-year contract by NIAAA.

Inquiries may be directed to: National Clearinghouse for Alcohol Information Annex, P.O. Box 1156, Rockville, Maryland 20850. Phone: (301) 948-4450.

## Alcoholism Linked to Criminality at Joint Alcohol Abuse Conference

Antisocial personality, alcoholism, and drug dependency are the most common ychiatric disorders associated with criminality, Samuel B. Guze, M.D., of the Department of Psychiatry, Washington University School of Medicine, told the Joint Conference on Alcohol Abuse and Alcoholism held in February in Baltimore. The conference was co-sponsored by the National Highway Traffic Safety Administration, National Institute of Law Enforcement and Criminal Justice, and National Institute of Alcohol Abuse and Alcoholism.

Dr. Guze based his talk on a longterm study of convicted felous begun in 1959. The psychiatric results of the first phase of the investigation showed alcoholism in 43% of the felons, and an increased personal history of suicide attempts, wanderlust, military service difficulties, fighting, job troubles, and arrests.

Three years later a follow-up study showed alcoholism related to rates of recidivism. Of 121 parolees studied, 48 were alcoholics and 13 were questionable alcoholics. They had significantly more difficulty on parole than non-alcoholics.

A related study of the close relatives of the felons showed that the only psyliatric disorders seen more frequently

ong these relatives than among the general population were antisocial personality, alcoholism, drug dependency, and hysteria. The alcoholic relatives, moreover, showed higher rates for various forms of delinquency, social maladjustment, and crime than did the non-alcoholic relatives.

In 1967 a psychiatric and social follow-up of the original convicted felons was begun, with the results now completc. The original sample was 223 men; 209 were located, including 5 who had died (3 from violent deaths and a fourth probably from liver complications of alcoholism). 176 agreed to be reinterviewed.

The data obtained at the 8- to 9-year follow-up confirmed the findings and diagnoses of the original investigation and study of the relatives. However, a remission of alcoholism and drug dependency was correlated with a decline in recidivism.

The majority of the convicted felons came from grossly disturbed families and married women from similarly disturbed backgrounds. The children would be exposed to a double dose of factors that predispose to delinquency, criminality, and alcoholism, whether these factors are genetic, environmental, or both.

A study of female criminals, parallel to that of the males, was begun in 1969. All the work done so far indicates that the women's histories are similar to the men's, except that hysteria is more common (80%), a rate 20 times greater than is found in the general population.

A five-year follow-up is planned to verify the diagnoses, along with a study of the women's husbands, and a comparison of recidivism rates with various psychiatric diagnoses.

#### Alcohol-Related Crashes Most Common among Young Drivers

Young drivers are involved in more collisions than older drivers. Yet excessive drinking is less common among the 18-25 year-olds than among older groups. What is the relationship of alcohol to youth-involvement in crashes?

According to Richard Zylman, Associate Research Specialist, of the Center of Alcohol Studies of Rutgers University, small amounts of alcohol, i.e., resulting in BAC's which are positive but less than 0.05%, appear to affect young drivers more than older people. There is evidence that drivers under 18, who already have the worst collision-vulnerability ratio with nothing to drink, increase that vulnerability threefold after 1 or 2 drinks.

## Housing and Treatment of the Public Inebriate

A complete system of services for housing and treating the public inebriate should contain emergency screening and referral centers, detoxification units, subacute detoxification housing, psychosocial evaluation and referral groups, outpatient and inpatient treatment modalities, and various types of housing, including temporary, transitional, supervised boarding homes/hotels, and domiciliary.

These recommendations were made by Irving W. Shandler, President of the Diagnostic and Rehabilitation Center of Philadelphia.

A study of 190 arrests in Philadelphia showed that about 10% were in urgent need of hospitalization, and about a third required it.

#### Prototype Program for Re-educating Drinking Drivers

A prototype community program to assist and retrain convicted drinking drivers, designed by the Public Systems Research Institute of the University of Southern California, was described by H. Sackman.

The program included 60 court-assigned subjects convicted on drunken driving charges. They were subjected to a 12-week driver assistance and retraining program including individual counseling, class sessions, group therapy, and crisis intervention in the form of a 24-hour hot line and emergency cab pickup service for intoxicated subjects. Over the three-month program, only 10% dropped out. A control group of 30 subjects was used for crisis intervention services only.

Individual counseling and class retraining were considered successful in meeting program objectives. Standardized initial and exit interviews were found to be the most cost-effective forms of counseling; individualized counseling was more costly and must be used selectively. Class retraining was enthusiastically received by participants, and was also cost-effective.

c/o Ruth Fo 150 East 52 New York	2nd Street	m
Name		Degrees
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City		Nature of Interest
		In Alcoholism

## To Drink or Not To Drink: Two Approaches to Behavioral Therapy

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mitted a better discussion of problems associated with drinking. In an alternate approach she organized therapeutic groups, in which patients and the staff were permitted to consume alcoholic beverages. During the meetings certain behaviors such as discussions of current problems or statements about the future were reinforced. Acceptance was demonstrated if patients maintained low blood alcohol levels. On the other hand, negative reinforcement was applied if patients tried to dismiss responsibility for their behavior or if high blood alcohol levels were detected.

Dr. ElDean Kohrs, from the Northern Wyoming Mental Health Center, did not discourage patients receiving disulfuram from visiting their usual drinking places, which he believes are important centers of social activity. Disulfuram therapy was later substituted by electrical aversive techniques administered while patients observed slide pictures of bars. However, a long-term commitment to total abstinence was not required.

Dr. S. H. Lovibond from the University of New South Wales in Australia compared three therapeutic approaches, which included behavioral techniques. He found best results in alcoholics treated with both electrical aversion conditioning and self-regulation training. (Self-regulation training consists of teaching patients to discriminate their own blood level within a limit of .08 gm%.) More limited therapeutic results were observed in patients who received self-regulation training alone and in those who received aversive conditioning alone.

John Ewing, M.D., Director of the Center for Alcohol Studies, University of North Carolina, who organized the Symposium, reported his experiences teaching groups of alcoholics to drink moderately. Alcoholics were permitted to drink but they received electric shocks if the blood alcohol reached levels above .06 gm%. Attrition from the program has been a problem, but some subjects who completed a 3-month program are still showing controlled drinking patterns 18 months later.

George Bigelow and Ira Liebson, a psychologist and psychiatrist respectively, from Baltimore City Hospital illustrated how social isolation decreased alcohol consumption in alcoholics who drank under experimental conditions. The lengthening of drinking intervals also decreased the amount of alcohol taken. In the opinion of the authors this type of research will lead to methods of controlling drinking behavior in alcoholics.

Dr. Alfonso Parades, Professor of Research Psychiatry at the University of Oklahoma, discussed the "loss of control" concept, noting that the relative success in controlling drinking in alcoholics reported by several experimental studies might be related to the absence of conventional social pressures in the experimental setting. Once the patients are back in their usual environment this purported ability to control disappears.

Dr. Jerry D. Keelm, Professor of Psychology, York University, noted that in many cases therapeutic investigations are experiments and that as such experimental designs should be incorporated with the therapeutic procedures. Behavioral treatments of excessive drinking grew out of experiments in psychology that exclude introspective data. He believes this methodolgy is more capable of controlling stimuli than responses.

Alfonso Parades, M.D.

#### Behavior Therapy Aimed At Total Abstinence

During the Amsterdam International Congress the symposium "Behavioral Approaches to the Treatment of Alcoholism" included two groups of papers. One group was on experimental and clinical approaches to try to help alcoholics to control their drinking at normal social levels (see p. 1). In the same symposium, however, a group of papers focused on total abstinence approaches. These varied from learning situations to the use of severe noxious stimuli associated with drinking.

Dr. S. G. Laverty and Mr. Hilton Murray described group therapy for alcoholics which entails the principles of learning theory as carried out at Kingston Psychiatric Hospital, Ontario, Canada. Patients work together with a therapist for three weeks of intensive group confrontation.

Dr. Miriam Cohen described the inception of an industrial program while she was medical research associate at Baltimore City Hospitals. This was developed with the approval of union officials and required identified alcoholics to report for daily monitoring, random breath tests and the taking of Antabuse under the supervision of the industrial nurse. When drinking occurred the worker was suspended without pay.

From Antwerp, Belgium, Dr. Jan Lehembre described a 13-week hospital program using punishments and rewards with 43% of 85 patients remaining abstiment during a one-year follow-up.

Again from Baltimore came a report by Dr. Ira Liebson of concurrent treatment of alcoholism and narcotic addiction in which the giving of methadone is used as a reinforcer to persuade patients to take Antabuse in order to remain totally abstinent from alcohol.

Dr. Augusto Proaño from Vancouver, British Columbia, described what he calls psycho-chemical behavioral treatment of alcoholism. His program includes conditioning aversive therapy, using the pairing of drinking of alcoholic beverages and the injection of succinyl choline chloride which causes muscle paralysis and major unpleasant subjective sensations. Patients are also placed on Antabuse and of 31 patients so treated, 18 have maintained total sobriety and one has had only two short relapses.

A scientific behavioral evaluation of patients exposed to aversion therapy was described by Dr. Robert F. Chapman now of Madison, Wisconsin, but describing work done when he was at Washington State University. In an experimental setting he has developed a technique for measuring the avoidance response to alcholic beverages in patients before, during and after treatment.

Much useful discussion followed the presentations of these papers including some thoughts on the negative and positive reinforcements offered to the alcoholic by natural social forces. It was generally agreed that we must not equate temporary relapse with failure.

In summarizing the meeting, Professor Vladimir Hudolin, Director of the Institute for the Study and Treatment of Alcoholism in Yugoslavia, emphasized the need for tightening up our definitions of alcoholism and for studying the social reinforcements in the life of an alcoholic. A balance between the total abstinence approaches and those experimenting with controlled drinking is desirable.

Dr. Hudolin edits the International Journal of Addiction to Alcohol and Other Drugs and has kindly offered to publish these papers, both on total aversion and on experiments to control drinking, as a special supplement. Drs. Keehn and Ewing are co-editors and publication in 1973 is planned.

John A. Ewing, M.D.

## Alcohol Workers Report at Liver Disease Meetings in Chicago

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Type III was characterized by loss of some or most of the fibrillar pattern of AH, and consisted of an amorphous electron dense matrix displaying residues of randomly oriented fibrils. It was considered to be an older or altered form of AH. The three types appear to be successive stages in the formation of AH.

## Alcoholic Livers Contain Increased Collagen and Glycosaminoglycans

By analyzing samples of hepatic connective tissue of patients with alcoholic hepatitis, John T. Galambos of the Department of Medicine, Emory University School of Medicine, found increased amounts of collagen as well as nonextractable and hyaluronidase-resistant glycosaminoglycans (GAG) (as in cirrhosis). However, the predominant GAG was chrondroitin-4-SO<sub>4</sub>, and extractable collagen was also significantly increased, indicating that this disease process includes complex biochemical events in the hepatic mesenchyma, some of which are reversible.

#### Drug Therapies Tested in Acute Alcoholic Liver Disease

Two controlled trials of different drugs —prednisone and d-penicillamine—reresulted in only limited improvement in 
patients with acute alcoholic liver disease.

In the prednisone trials, J. Campra et al. of the Liver Unit, John Wesley County Hospital and the Department of Medicine of the University of Southern California, treated 45 acutely ill patients. The prednisone group showed no significant improvement except on serum albumin, which may have been due to a nonspecific effect of prednisone on albumin synthesis. Three patients in this group developed complications which were possibly related to prednisone.

Another team, composed of R. H. Resnick and F. L. Iber, (Tufts University School of Medicine), J. Boitnott (Johns Hopkins University Medical School); and J. J. Cerda (University of Florida College of Medicine), tested the effects of dpenicillamine on 21 patients, with 19 acting as a control group. The drug treatment did not influence survival or liver function test abnormalities but significantly diminished histologic evidence of fibrosis and cellular injury when compared to placebo therapy.

## Fasted Liver More Sensitive to Toxic Effects of Alcohol

Fasting and alcohol are synergistic in lowering albumin synthesis, according to tests on rabbits conducted by M. A. Rothschild, M. Oratz, and S. S. Schreiber of the Radioisotopes Service, VA Hospital, NYU School of Medicine.

All the male donor rabbits were fasted 48 hr. before perfusion with whole blood or washed red cells with known amino acid content. <sup>14</sup>C labeled CO<sub>2</sub> was used to label newly synthesized albumin. Albumin synthesis decreased from 33 mg to 18 mg when the liver was obtained from a fasted donor and fell further to 10 mg when 220 mg% of alcohol was added to the perfusate. Excess tryptophan, preprefusion of the liver, and increasing the content of amino acids tenfold had no effect in restoring albumin production in these fasted livers as was seen when the liver was obtained from a fed donor.

These effects were confirmed using immunologic procedures for the determination of newly synthesized albumin. Hydrocortisone reverses the alcohol-induced inhibition of albumin production in the fasted liver, probably by maintaining hepatic ribosomal RNA.

This study reports the first in vitro confirmation of the <sup>14</sup>C-CO<sub>2</sub> technique by direct comparison with an independent immunogolic method.

#### Phenobarbital Increases Rate of Ethanol Metabolism in Man

When phenobarbital was administered to 4 alcoholic patients with no evidence of liver disease, ethanol disappeared from their blood at an increased rate. This increase cannot be explained by absolute increases in the activities of either of the ethanol oxidizing enzymes measured (alcohol dehydrogenase or NADPH). The study was conducted by E. Mezey and E. A. Robles of the Department of Medicine of the Baltimore City Hospitals and Johns Hopkins University.

They administered phenobarbital on 8 consecutive days in dosages of 240 mg a day to patients who were sober and had received no medications for 3 weeks.

#### MEOS Differentiated From Catalse and ADH Activity

To study the chemical nature and the mechanism from the increase in MEOS (hepatic microsmal ethanol-oxidizing system) after chronic alcohol consumption, a catalase and alcohol dehydrogenase-free system was prepared by a team from the Bronx VA Hospital and Mount Sinai School of Medicine composed of R. Teschke, J.-G. Joly, Y. Hasumuna, and C. S. Lieber. They solubilized rat liver

microsomes and fractionated them by DEAE-celluose column chromatography.

The respective roles of the separated components remain to be studied. The active fraction contained cytochrome P-450, NADPH cytochrome c reductase and phospholipids, which all increase after ethanol feeding.

#### Pulsation in Spider Angiomas Explored

In a study conducted by H. Tanyol, R. Pennock, D. Rilling, and M. Kissen of Hahnemann Medical College of Philadelpiha 41 of 362 (11%) male alcoholics showed spider-web-like manifestations. In 3 of the patients, 9 spiders showed definite pulsation synchronous with the radial pulse. It is possible that spider angiomas in alcoholic individuals, like other angiomas, are neoplastic lesions. Vasculo-fibroproliferative action of ethyl alcohol may be instrumental in the genesis of these structures.

#### Ethanol and Diet Affect Fatty Acid Oxidation by Hepatic Mitochondria

To investigate whether, in addition to a redox change, mitochondrial damage produced by chronic ethanol ingestion may alter fatty acid metabolism, A. Toth, C. S. Lieber, A. I. Cederbaum, D. S. Beattie, and E. Rubin of Mount Sinai School of Medicine and the Bronx VA Hospital, studied mitochondia from rat livers fed high-fat diets containing ethanol.

They concluded that in addition to a redox change produced acutely by metabolism of ethanol, persistent alterations of mitochondria appear to play a role in decreased fatty acid oxidation; a high-fat diet increases B-oxidation of fatty acids by hepatic mitochondria; and a chronic ethanol ingestion further increases B-oxidation, which is consistent with the previously reported increase in ketone production.

#### ALCOHOLISM MAY STRIKE AGED

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pated in a panel on geriatric patients at the meeting. He emphasized the high chance of misdiagnosing these patients, many of whom experience the death of loved ones, loneliness, and frustration. Some abstinent alcoholics may start drinking again after a death in the family; others may start drinking excessively for the first time. Dr. William Rawls moderated the panel.

## RESEARCH and REVIEW

#### Virus Hepatitis Demonstrated As Cirrhosis Link

Using lymphocytic transformation in response to Au (Australia) antigen as a test of cellular immunity, a team from Glasgow Royal Infirmary headed by N. M. Pettigrew has pointed to hepatitis virus B as an etiological factor in alcoholic cirrhosis.

All eleven cases of alcoholic cirrhosis they studied gave evidence of cell-mediated immunity to hepatitis virus B with significant lymphocytic transformation (P value less than .001). This was also true of patients who had recovered from chronic virus B hepatitis. On the other hand, 14 normal controls, 7 women with primary biliary cirrhosis, 5 patients with chronic active hepatitis, and 4 men with alcoholism with normal liver showed results in which lymphocytic transformation was minimal and did not overlap the other two groups. Nonspecific stimulation of lymphocytes with tuberculin and P.H.A. did not produce similar results. None of the sera contained Au antigen.

That this stimulation test demonstrates infection with hepatitis virus B as an etiological factor in alcohol cirrhosis is particularly significant in Scotland, where virus B only accounts for about 5% of the cases of viral hepatitis. The authors suggest that the outcome of virus B infection in the alcoholic may be modified, with the development of cirrhosis, rather than recovery of normal liver which is the rule. (The Lancet, October 7, 1972, pp. 724-25.)

## Alcoholic Sociopaths Differ from Those with Primary Alcoholism Diagnosis

Are there significant differences in terms of demographic variables and alcohol histories between patients whose primary diagnosis is alcoholism and those whose alcoholism is secondary to a psychiatric disorder? Yes, according to a study of 228 alcoholics admitted to two St. Louis hospitals. John Rimmer and a team from the Department of Psychiatry, <sup>3</sup> Washington University School of Medicine, conducted the study, which is part of a larger investigation of clinical and familial aspects of alcoholism.

The sample was divided into four groups: woman primary alcoholics (61); men primary alcoholics (112); women depressive alcoholics (26); and men sociopathic alcoholics (29). Another group of 19 men and women had some other primary psychiatric diagnosis.

A comparison of the two groups of male alcoholics showed that generally the sociopathic alcoholics were younger, had fewer years of alcohol abuse, and became alcoholics at a younger age. Yet in the examined symptoms and consequences related to alcoholism, they were virtually indistinguishable from the primary alcoholics. Significantly, more of the sociopathic alcoholics had social problems than did the primary alcoholics.

Women alcoholics showed fewer differences, although the depressive alcoholics reported fewer years of alcohol abuse and more suicide attempts.

The men primary alcoholics reported longer alcohol abuse than any of the other three groups. They also reported morning drinking more frequently than the women primary alcoholics, and more blackouts than the sociopathic alcoholics.

Delirium tremens were more prevalent among both men's groups than among the women, but there was no significant difference between men and women on the incidence of liver disorders and hallucinations.

The social problems of the men sociopaths—parents' disharmony, arrests due to drinking, drinking-driving troubles, school problems, drug addiction—were far more marked than those of the men primary alcoholics. The authors suggest that the prevalence of social problems of persons with an early onset of alcoholism may be due to the sociopaths among them. (Quarterly Journal of Studies on Alcohol, September 1972, Vol. 33, No. 3, pp. 658-66.)

#### Propranolol Undergoes Clinical Test as Alcoholism Drug

The drug propranolol is now being tested in large-scale clinical trials to determine whether it is effective in fighting the psychological and behavioral effects of alcohol. Dr. Jack Mendelson, a psychiatrist at Harvard and Boston City Hospital, is conducting the tests, which he began on the basis of favorable results with 24 male inpatient alcoholics.

In reporting his preliminary work to the International Congress of Pharmacology meeting held in San Francisco last July, Dr. Mendelson said that drinkers who had been given propranolol f three days prior to drinking failed to experience any mood change or alteration of psychomotor function, while those who were given placebos exhibited considerable effects of alcohol.

Propranolol, a beta blocker, is normally used to control cardiae arrythmias. It does not induce illness in the subject, as does disulfuram, but blocks the moodchanging action of alcohol. It also has some of the anxiety-reducing properties of a minor tranquilizer.

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