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PHYSICIAN'S ALCOHOL NEWSLETTER

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ALCOHOL FATTY LIVER STUDIED AT BELLEVUE

The effectiveness of several antioxidants in the prevention of alcoholic fatty liver in rats has been tested at New York's Bellevue Hospital. The results suggest that ethanol may interfere with hepatic metabolism of chylomicron long chain fatty acids.

Dr. Charles S. Lieber of Cornell's Liver Disease and Nutrition Unit and Leonore M. DeCarli, B.A., investigated a number of agents reported to protect the liver against one large dose of ethanol to determine the degree of protection afforded when ethanol ingestion is chronic.

Large amounts of tocopherol, 0.5; N,N'-diphenyl-p-phenylenediamine; 1.5; and asparagine, 10 mg per cal. were added to nutritionally adequate liquid diets containing 36 per cent of calories as ethanol or sucrose and fed to 47 groups of rats (6 litter mates per group) for 24 days. Each of these additives had previously been reported effective in preventing steatosis following a single large dose of ethanol. "The present data," Dr. Lieber stated, "indicate that anti-oxidants and asparagine are ineffective."
(Continued on page 4 col. 2)

DR. FOX STRESSES RESEARCH INTO ORIGINS OF BEHAVIOR

A charging bull may be made to stop dead in his tracks and become docile by means of remote control stimulation of a certain area in his brain. Untrained planaria may correctly go through a maze when fed RNA from planaria which have been trained.

Such psychological research which deals with the origins of behavior is being carried out on a wide front and may eventually bring new insights into alcoholic drinking, Dr. Ruth Fox declared at the annual meeting of the National Council on Alcoholism.

Psychological testing to find the alcoholic personality has not been fruitful, she said, and has been over-used in the past. Psychoanalytic theory has contributed to understanding the soil from which alcoholism and many other non-adaptive responses arise, but standard psychoanalysis has had meager success in dealing with the alcoholic. There is probably no other illness which affects the total personality as much as alcoholism, she stressed.

Areas of research which were indicated as possibly fruitful were genetic, learning theory, pharmacological and neuroanatomical.

The necessity for genetic research was underlined by the fact that 52 per cent of alcoholics had one or both parents who were alcoholic. By selective breeding, Dr. Gerald McLearn in Berkeley, California, has been able to breed a
(Continued on page 3 col. 2)

DESCRIBES EFFECTS OF ALCOHOL ON BRAIN

The alcohol withdrawal syndrome, with its complications of tremors, convulsions, hallucinations and delirium tremens is a direct effect of alcohol on the brain, said Dr. Stanley Gitlow at the annual symposium of the New York Medical Society on Alcoholism in a combined meeting with the National Council on Alcoholism.

Alcohol has two effects on brain function: sedation lasting five to six hours and psychomotor hyperactivity lasting twelve to twenty-four hours. Therefore ethanol intoxication has a clinical picture representing the sum of two asynchronous and opposing pharmacological effects.

The term withdrawal syndrome is thus somewhat of a misnomer since it defines a primary and direct pharmacologic result of ethanol upon the brain and the patient may actually suffer from it long before the cessation of alcohol ingestion. The psychomotor hyperactivity becomes apparent within two to five hours after ingestion of alcohol, as the sedative action wanes.

Physicians should be suspicious of the ingestion of other soporifics or of complicating pathology if the alcoholic patient is deeply comatose after that time. In contrast to its sedative effect, Dr. Gitlow said, the psychomotor hyperactivity effect of alcohol is dose dependent and becomes more prolonged with higher amounts. Recovery from this phase is largely accomplished within three to four days after its onset; complete disappearance of its more subtle characteristics will take weeks.

Phenothiazines are the most useful
(Continued on page 2 col. 2)

CULTURAL FACTORS IN ALCOHOLISM

After their first treatment program other than drying out, 16 per cent of 110 poverty class alcoholics had not been drinking for a year or more after treatment, 54 per cent were still drinking but less than before, 16 per cent had no change in their drinking habits, and for seven per cent the illness had progressed.

These are the findings of Dr. David Pittman and his colleagues at Washington University, who followed up 90 per cent of the original group.

Success, he felt, should be measured not only in terms of abstinence, but also in terms of general life improvement.

The sociologist has pioneered in demonstrating that patterns of drinking behavior depend on inter-relationships of psychological and cultural variables. Frequent drunkenness and high con-

sumption of alcohol, he stated, tend to occur in cultures where the need for dependence is deprived or punished both in adult or childhood life, and a high degree of responsible, achieving independent behavior is required.

Individuals who develop alcoholism have difficulty in structuring their social roles in accordance with the requirements of an impersonal complex society. The anomie or normlessness of American life today contributes to a background in which alcoholism develops.

To study these factors at their height, Dr. Pittman considers the Negro population, which has an incidence of alcoholism two to four times that of the white, to be specially significant. The white poverty group, he believes, should also be the subject of intensive

(Continued on page 2 col. 3)

Editorial:

TRIBUTE TO DR. TIEBOUT

Dr. Harry Tiebout's death on April 2nd was felt throughout the field of alcoholism.

For the past quarter century he had become known as a specialist in alcoholism—not because he chose any specialty other than psychiatry, or because his patients were all alcoholics which they were not—but because alcoholics sought him out in great numbers, often after reading some of his writings on the subject; more often after hearing of him from a recovered alcoholic who gave him full credit for his part in that recovery.

His interest in alcoholism became aroused when he learned of Alcoholics Anonymous in its earliest days. He was the first psychiatrist to endorse it whole-

ALCOHOL AS SYMPTOM

Dr. George H. Pollock of the Institute for Psychoanalysis in Chicago has differed with a study by psychologist Kate L. Kogan and sociologist Joan K. Jackson of the University of Washington School of Medicine, who have reported, after analyzing MMPI results, that sobriety in an alcoholic is associated with decreased personality disturbance in his wife. (Physician's Alcohol Newsletter, March, 1966)

In a communication to PAN, Dr. Pollock states: "My own studies have focused on clinical evaluations over a period of time of patients who are alcoholic and of their spouses. So far the evidence speaks for a pathological symbiosis. These data, derived from therapeutic experiences, give information in depth and over a period of time differ from that obtained by an instrument such as the MMPI.

"When marital symbiotic balance is disrupted, new adjustments are required," he said. "New symptoms may appear indicating the state of imbalance. Alcoholism is a symptom.

"As such it may be replaced by other symptoms of maladjustment when there are interpersonal shifts which ultimately affect the individual's inner state of organization."

Marital studies of alcoholics and their spouses, in his opinion, should include investigations of total family interactions. The pooling of information for each member of the family, studied individually can approximate the "fit" of the individuals with others as well as with themselves.

heartedly, and to try to learn about it in depth.

Dr. Tiebout was active in the broader field of alcoholism also. A board member of the National Council on Alcohol from its inception, he served as Chairman of the Board, 1950-51 and as president 1951-54. He was a member of the Connecticut Commission on Alcoholism, serving as the vice chairman from 1952 to 1957. He was chairman of the American Psychiatric Association's committee on alcoholism during the life of that committee, and was a member of the Committee on Alcoholism of the World Health Organization in Geneva from 1954 to 1959.

During the past nine years he served as one of the non-alcoholic members of the Board of Trustees of Alcoholics Anonymous.

All who knew him mourn the loss of his breadth of knowledge and deep understanding of the alcoholic. Men like Harry Tiebout are desperately needed in this field. (This tribute to Dr. Tiebout was written at the request of Physician's Alcohol Newsletter by Mrs. Marty Mann, Executive Director of the National Council on Alcoholism.)

ALCOHOL ON BRAIN

(Continued from page 1 col. 3)

drugs in controlling the excess psychomotor activity of the withdrawal state. However, they fail to do for the alcoholic what ethanol, barbiturates, chloral hydrate, glutethimide and paraldehyde do "only too well".

In the series of over 1,000 patients treated for alcohol withdrawal syndrome with chlorpromazine, Dr. Gitlow declared, not a single instance of intrahepatic cholestatic hepatitis was noted.

He warned against prescribing ethanol during withdrawal to replace other sedatives, since its sedative action is too brief, its psychomotor effect too strong, and its demoralizing effect on the alcoholic pronounced. Patient care is simplified, he said, by the abrupt cessation of ethanol, and the physician's role in reference to the patient and his problem is clarified because the objective is to help the patient attain and maintain abstinence rather than to teach him how to drink ethanol more successfully.

In support of this approach, he reported that when alternate patients were treated with abrupt withdrawal from alcohol versus gradual weaning from alcohol, the incidence of delirium tremens was the same.

OUT-PATIENT FACILITIES

(If you have a patient who needs outpatient treatment for alcoholism these centers and clinics are available.)

ACCEPT—New York Council on Alcoholism, Inc.

167 East 80th Street
New York, N.Y. 10021
TR 9-0914

Open Monday through Friday 9:00 a.m. to 5:00 p.m.

ACCEPT offers—Information; Counseling; Literature; Psychiatric Evaluation; Individual and Group Therapy; Educational Discussion Groups.

Flower Fifth Avenue Hospital Department of Psychiatry Alcohol Clinic

23 East 105th Street
New York, N.Y.
EN 9-7900

Call for information and appointment.

State University Alcoholism Treatment Clinic

Room 205—Pavilion #2
600 Albany Avenue (Corner of Albany Avenue and Fenimore Street)
Brooklyn 3, N.Y.

An outpatient clinic providing medical evaluation, guidance and treatment for people for whom drinking is or may become a problem. Open to all residents of the New York area. No age limits. No fee.

Sunset Park Alcohol Clinic

Sunset Park Health Center
Room 324—GE 6-2800
514 49th Street (between 5th and 6th Avenues)
Brooklyn 20, N.Y.

(Open facilities for in-patients were listed in the March issue of Physician's Alcohol Newsletter.)

CULTURAL FACTORS

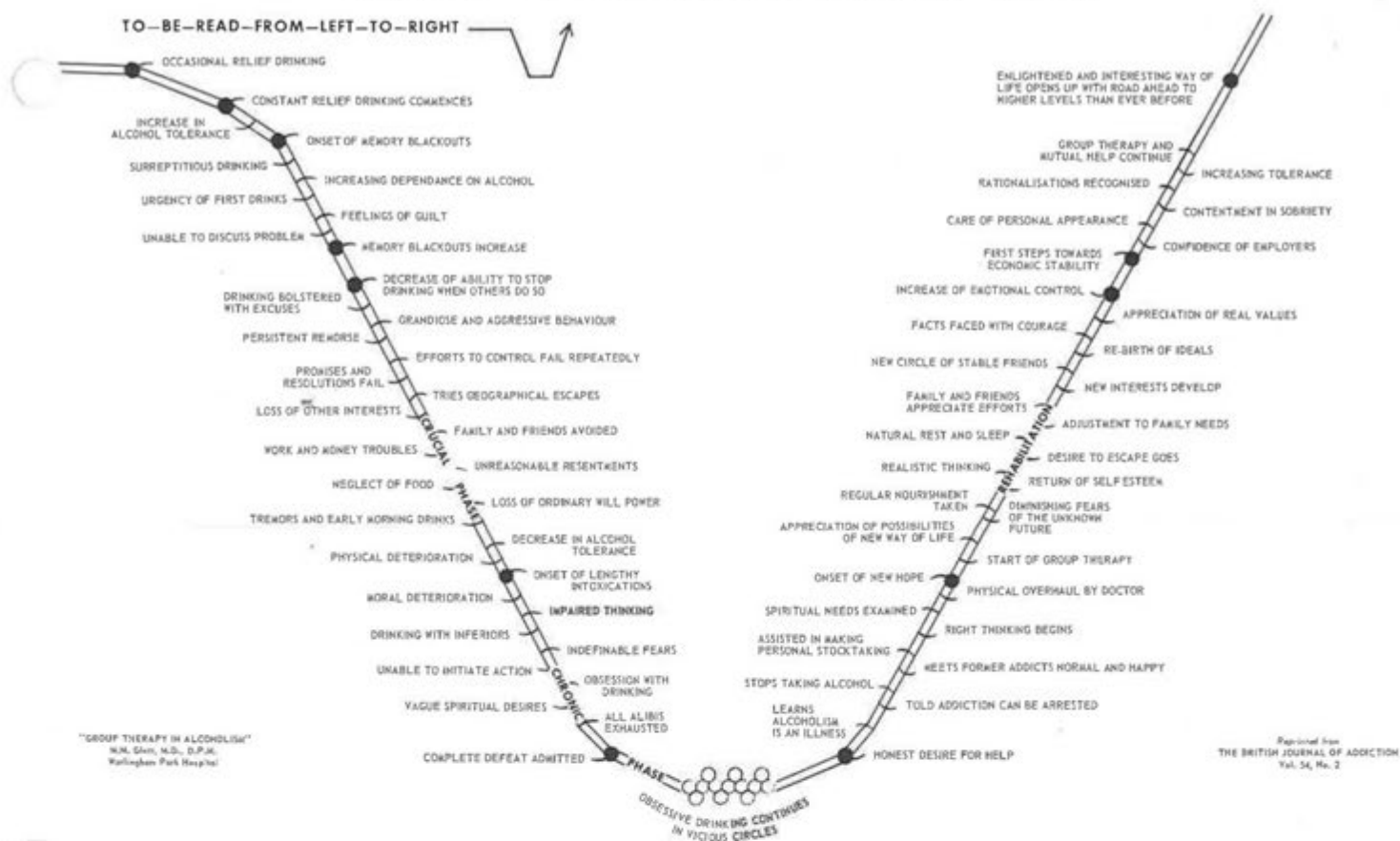
(Continued from page 1 col. 2)

work; the inhabitants of skid row have made a retreatist adaptation to the normlessness of American life.

Perhaps most needed, in his opinion, is research into group drinking patterns before an individual crosses the border into alcoholism. Such studies are under way in California and Washington, D.C.

The solution to the alcohol problem cannot be one dimensional or simplistic. Those attempting to solve it, he remarked, encounter some of the overflow of the stigmatic approach to the alcoholic patient himself.

CHART OF ALCOHOL ADDICTION



BOOKS

Aspects of Alcoholism, vol. 1, preface by Ebbe Hoff, M.D., vol. 2, preface by Ruth Fox, M.D., Lippincott, 1966.

Drinking in French Culture, Roland Sadoun Ph.D., Giorgio Lolli, M.D., Milton Silverman, Ph.D., Center of Alcoholic Studies, Rutgers University 1965.

MEETINGS

Aug. 15-19—International Symposium in Memory of Prof. E. M. Jellinek—Santiago, Chile.

REPORT ON FLAGYL

Another study on metranidazole, (Flagyl) the drug whose anti-alcohol effects on human subjects have stirred wide controversy, has shown that it causes rejection of alcohol in addicted rats. And, according to a group of California investigators, the general condition of the animals appeared to improve during treatment.

Drs. Jo Ann T. Taylor, Berry Campbell and Wilford Hasslett of the California College of Medicine described their latest experiments with 58 Sprague Dawley rats at the meeting of the Federation of American Societies for Experimental Biology in Atlantic City.

STRESSES BEHAVIOR RESEARCH

(Continued from page 1 col. 2)

strain of mice which takes 50 to 75 per cent of its fluid as alcohol, and another strain which will shun alcohol despite extreme dehydration.

Neuroanatomical research has discovered brain centers which when stimulated, produce hunger, thirst, rage, docility, pleasure and maternal behavior, without control by the conscious mind. Understanding the interrelationships between these zones and the role of tranquilizers and alcohol upon them may provide a basis for stopping the uncontrollable drive to drinking.

As pharmacological research, Dr. Fox cited Dr. Gitlow's description of the short-acting sedating effect and the longer-lasting stimulation of psychomotor activity of alcohol. The experiments of Dr. Jack Mendelson, which demonstrated an increased tolerance to alcohol in alcoholics while drinking, and of Dr. Wikler, who considers alcohol a "drive inducer", were also discussed.

Research on learning has shown that ribose nucleic acid (RNA) is increased during the learning process. This physical change, she believes, may have great meaning in changing learning patterns. Imprint learning, recently discovered,

takes place during a short period of time in infancy, and is almost impossible to eradicate at a later time. A young child observing a drunken parent may have this impression indelibly impressed on his mind. This may have some bearing on those alcoholics who have had an alcoholic parent.

Associative learning by conditioned reflex, first described by Pavlov, was singled out as a stimulus to various treatment methods for alcoholism.

Treatment with the aid of conditioned reflex treatment by scoline, hypnosis, and also by LSD, Antabuse, various types of group therapy, and Alcoholics Anonymous were discussed.

Dr. Fox sees a distinct move away from rigid psychoanalytic concepts, toward simpler, shorter, more direct forms of treatment. In this connection, she cited the books, *Reality Therapy* by Dr. William Glasser, and *Transactional Analysis* by Dr. Eric Berne.

In conclusion she observed that results of treatment are getting better year by year as the understanding of the condition improves, the main problem being to convince the patient that a life without alcohol can be more rewarding than one with it.

FINDS INTRACELLULAR CHANGES IN ALCOHOL MYOCARDIOPATHY

Electron microscope observations of the alcoholic heart have revealed intracellular changes distinguishing alcoholic cardiopathy from other, previously indistinguishable cardiopathies, Dr. Carl S. Alexander, chief of the cardiovascular section of the Minneapolis Veterans Administration Hospital reported to the 47th Annual Session of the American College of Physicians. These changes include "the loss and fragmentation of myofibrils, aggregation of large, swollen, damaged mitochondria, increased deposition of glycogen, and dilation of sarcoplasmic reticulum."

"It seems that on the basis of these intracellular changes, alcoholic myocardiopathy can be distinguished from rheumatic heart disease with mitral or aortic valve involvement and perhaps also from idiopathic nonalcoholic heart disease," Dr. Alexander said.

When alcoholic cardiopathy is detected early enough prognosis is good, he added.

Myocardium was obtained by needle biopsy from 50 patients, all but three of whom were chronic alcoholics. Findings were compared with 20 control biopsies obtained from rheumatic heart disease patients undergoing mitral or aortic valve replacement.

Comparing the myocardium from alcoholic heart patients, Dr. Alexander observed "virtually no contractile elements. The entire area is occupied by bizarre-shaped, abnormal mitochondria, glycogen, and dilated sarcoplasmic reticulum. Higher magnification reveals densely

packed mitochondria, some of which appear moth-eaten. It is difficult to find intact cristae in any of them. Heavy black granules of glycogen are plentiful.

"These changes suggest that in alcoholic myocardiopathy, mitochondria fail to produce energy required for muscle contraction, either as a result of alcohol directly or as a result of loss of important elements required for oxidative phosphorylation, such as Krebs cycle enzymes, potassium, and magnesium."

FATTY LIVER

(Continued from page 1 col. 1)

tive against steatosis resulting from prolonged ethanol intake." However, large amounts of choline and methionine, previously reported ineffective against acute fatty liver, reduce the triglyceride accumulation in the livers of rats maintained on the 24-day alcohol regime.

The mechanism of steatosis, Dr. Lieber suggests, may be fundamentally different under the two experimental conditions, since different fatty acids accumulate: after a large single dose of ethanol, the fatty acids of hepatic triglycerides originate from adipose tissue, while after prolonged ethanol intake, they consist predominantly of endogenously synthesized dietary fatty acids.

Use of choline and methionine in human alcoholic fatty liver prevention and treatment is now being investigated.

DIET AND ALCOHOL

Drs. Cesar L. A. Gomez-Dumm and Eduardo A. Porta offered to rats two liquid diets high in alcohol (50 per cent) and low in fat (six per cent) but with different amounts of protein (six or 16 per cent) and carbohydrate (38 or 28 per cent).

In a presentation at the meeting of the Federation of American Societies for Experimental Biology, they reported that animals consuming the diet with high protein for two months grew little, had minimal death rate and their livers were only moderately fatty with inconspicuous ultrastructural alterations.

Those offered the low-protein diet (six per cent) grew poorly, had a high death rate and severe mitochondrial changes leading to the formation of Mallory bodies. These results, they concluded, emphasize the importance of dietary protein levels, not only in the development of fatty liver associated with chronic alcoholism, but particularly in the maintenance of mitochondrial integrity.

NEW ALCOHOL BILL

A bill providing for a comprehensive program of research and federal grant-in-aid to the states for the education and prevention of alcoholism, and the treatment and rehabilitation of alcoholics has been introduced in the House of Representatives by Congressman Ted Kupferman (R, 17th Congressional District).

Specifically, the measure calls for the establishment of an Office of Alcoholism Control under the Surgeon General to administer a program of matching grants to the states.

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