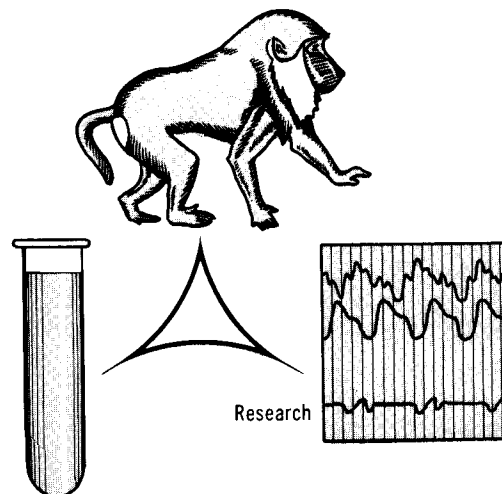


CLINICAL RESEARCH

A national repository for drug abuse and misuse case experience is being established in Houston by the Institute of Clinical Toxicology under the Bureau of Narcotics and Dangerous Drugs, Contract 72-46. The data accumulated annomously is expected to provide information on existing and changing patterns of abuse in the United States and their clinical significance.

The \$100,000 a year program is designed to recover information from emergency rooms, drug abuse treatment programs, college health centers, community mental health centers and other emergency health service facilities concerning illnesses related to abuse, overdose and other forms of misuse of drugs and other chemicals. Special one page forms provide for recording of essential information about the patient, the drugs, the clinical significance of the illness, the type of treatment and disposition. This information is obtained routinely during treatment but it is rarely recorded.

A campaign to encourage participation in data collection, now being launched, has the development of 500 data collection sites as its objective. The program is the first effort to achieve a quantitative estimate of the clinical significance of drug abuse and misuse related emergencies in the United States. The project director, Eric G. Comstock, M.D., a member of the faculty of Baylor College of Medicine and the University of Texas School of Public Health in Houston indicates that up to 100,000 case reports per year are expected. Information on participation in the program is available from Eric G. Comstock, M.D., Director, Institute of Clinical Toxicology, P.O. Box 2565, Houston, Texas 77001.

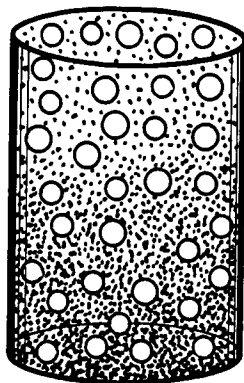


FROM
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INSTITUTE OF CLINICAL TOXICOLOGY
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HOUSTON, TEXAS 77001

Preliminary reports on the project will be made in Aspen, Colorado on August 14-15 during a two day intensive training program on the delivery of emergency services and consultation for drug abuse, overdose and poisoning sponsored by the American Academy of Clinical Toxicology.

Oxygenation

(ABSTRACT)



CARDIOPULMONARY AND BIOCHEMICAL STATUS

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Moderate hemodilution is a common practice during open heart surgery, and extra-corporeal circulation which has simplified and reduced the operative requirements for these procedures. During these times the blood gas analyses are watched for the purpose of checking the physiomechanical cardiopulmonary status. The pH, pCO_2 , pO_2 , O_2 saturation and base balance are observed for the gas transportation while the hematocrit and hemoglobin are observed to control hemodilution. Seldom is the effect of hemodilution no-

ticed to determine the gas transportation to and from the tissue. Whereas the hemoglobin and oxygen combine (HbO_2) to meet the requirement for tissue consumption; the variation of either has an effect on the O_2 content of the blood supply. Without hemodilution, cardiopulmonary values are based on relatively normal and non-varying hemoglobin. During hemodilution one must consider the changes in the hemoglobin, when analyzing the blood gas values. This may be one of the reasons why prolonged extra-corporeal circulation during cardiac operation has shown physiological deterioration increasing with time.

30 mongrel dogs were studied with moderate hemodilution. Anoxic arrest at normothermia with Ringer's lactate prime were divided into two equal groups, corrected and uncorrected metabolic acidosis. Cardiac output, myocardial contractility, EKG, blood pressure and arterial and venous blood samples were monitored before, during and after heart arrest.

There was noticeable change in the A-V difference in the electrolytes and glucose. The glucose showed a striking increase over baseline. The enzyme also showed an increase over baseline but no significant A-V difference. The blood gasses showed striking change in the A-V differences in all parameters, except for the hematocrit and hemoglobin which were kept standard to achieve a desired hemodilution. The cardiac output and contractility were reduced and did not resume baseline levels.

With deduction of O_2 content and cardiac output the supply of oxygen to the tissue would diminish by the amount of reduction of O_2 content coupled with the reduction of the cardiac output, leading to a gradual starvation of oxygen to be utilized by the tissues.