



**DATING THE PAST**—Part of a baby mammoth that was frozen in a glacier 20,000 years ago is displayed in the new exhibition "Dating the Past With Atoms," a cooperative project of the Lamont Geological Observatory of Columbia University and the Frick Laboratory of the American Museum of Natural History, New York.

## CARDIOLOGY

## Heart Treatment Success

➤ A NEW TREATMENT for a heart condition that often results in death has been reported.

Fifty patients (25 of them in a "control" or untreated group) who had acute myocardial infarction—heart failure caused by stoppage of a coronary artery—were studied by Dr. Demetrio Sodi-Pallares of the National Institute of Cardiology, Mexico City, with excellent results.

He reported his findings at Emory University, Atlanta, Ga., before an international meeting of more than 300 cardiologists. The treatment is still in the experimental stage, but has been successful with both humans and animals.

Since myocardial infarction is characterized by loss of potassium in the body cells, followed by increase in damaging sodium, Dr. Sodi-Pallares explained, the purpose of the new treatment is to force potassium into the cells.

One quart of a ten percent glucose solution containing potassium and regular insulin is consistently injected intravenously for five days and nights at the rate of 40 drops per minute.

The period of heart attack for those treated was only two days. It lasted seven days in the patients who were not treated, the cardiologist said.

Similarly, the period of shock for the control group that was untreated continued

for four days, but only two days for those treated. Arrhythmias, or irregular heart beats, lasted 12 days for the untreated, but only four days for those receiving treatment.

Angina pain was suffered by nine of the control group, but none of the treated patients had this symptom.

These and other statistics proved what chemical studies also have shown, that potassium was being effectively forced into the cells of those treated, Dr. Sodi-Pallares said.

Dr. Michael E. DeBakey, chairman of the department of surgery, Baylor University, Houston, Texas, reported that surgical methods have been developed that can be applied to virtually all forms of aneurysms of the aorta, no matter where they are located. An aneurysm is a localized dilatation of an artery due to pressure of the blood on a part of the wall that has been weakened by disease or accident.

"The risk of operation has been consistently reduced so that now the risk of aneurysm of the abdominal aorta is less than four percent for all patients, and less than one percent for patients with no associated heart disease," Dr. DeBakey said.

Follow-up observations over five years indicate that such patients can resume normal lives after the operation.

A great majority of more than 3,500 cases of occlusive heart disease studied, Dr. DeBakey said, were caused by arteriosclerosis

(hardening of the arteries). This was true for young as well as old individuals.

"In a high proportion of the cases," Dr. DeBakey said, "the disease was well localized, with normal arteries even near the diseased ones. The occlusion could be well established by means of angiography (X-ray of vessels after injection of radiopaque substance into an artery).

In more than 90% of cases, normal circulation was restored by operations, and the surgical risk was less than two percent, he said.

Emory University's School of Medicine sponsored "Six Days of Cardiology" as a postgraduate course. Chairman of the department of medicine is Dr. J. Willis Hurst.

• Science News Letter, 81:391 June 23, 1962

## MEDICINE

## New Leukemia Drug Helps Adult Patients

➤ A NEW EXPERIMENTAL drug (Methyl GAG) is one of the most promising of the drugs being tried on adult leukemia patients at the National Cancer Institute, National Institutes of Health, Bethesda, Md.

Twelve of 20 adult patients suffering from acute myelocytic leukemia (bone marrow cancer) showed complete remission after being treated with Methyl GAG, which is an abbreviation of methylglyoxal-bis-guanyl-hydrazone.

Drs. Robert H. Levin, Geoffrey M. Brittin and Emil J. Freireich, all of the National Institutes of Health, recently reported the findings of a study of Methyl GAG, which contrasted the pattern of remission in leukemia patients treated with 6-mercaptopurine (6-MP).

The researchers reported that the rate of return of normal elements to the marrow and to the peripheral blood in patients receiving Methyl GAG is much more rapid than in patients receiving 6-MP.

The marked prolonged pancytopenia (reduction in important blood components), which is found with 6-MP, was avoided with the newer drug, the investigators said.

Fourteen of 139 patients treated with 6-MP between 1955 and 1961 at the National Cancer Institute achieved complete remission.

But with Methyl GAG, the researchers said, leukemia cells disappeared more rapidly. Patients receiving 6-MP did not clear their marrow to less than five percent until 63 days, whereas, the Methyl GAG patients showed less than 10% of such cells at 28 days of treatment, and less than five percent present at 35 days.

The important thing about the new drug is the effect on adult patients, as most of the research has been directed against childhood leukemia which is largely the lymphocytic form affecting the blood.

"Methyl GAG is a very toxic drug, difficult to use," Dr. Freireich told SCIENCE SERVICE, "but the fact that it has achieved results may lead to the discovery of less toxic chemotherapy."

So far there is no permanent cure for leukemia, but remissions give hope for the future.

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