

MEDICINE

Nearly 100 Per Cent Cure of Lip Cancer May be Possible

Medical Association Hears of New Treatment For Meningitis; Racial Resistance to Tuberculosis

NEARLY 100 per cent of cases of lip cancers could be cured if treatment were started in the early stages of the disease and the cancer were completely destroyed, Drs. Udo J. Wile and Eugene A. Hand, of the University of Michigan, told members of the American Medical Association at their meeting in Kansas City.

This optimistic figure for possibility of cure of lip cancer was based on study of 425 cases. In moderately advanced cases, from 70 to 80 per cent can be cured, but the outlook in advanced cases is hopeless.

Of the cases studied by the Michigan physicians, 410 were in men and 15 in women. Greater prevalence of smoking, especially pipe smoking, among men than women may account for this large difference. In many cases the cancer definitely appeared on the spot

where the pipe had rested for many years. On the other hand, 15 per cent of the patients had never used tobacco in any form. About one-third had used it moderately or excessively.

The younger patients fared better than the older ones in recovering after treatment. This is interesting, Dr. Wile said, because it is generally believed that cancer in young persons is more malignant with less hope of cure than in older persons.

No Safe Childbirth Drug

No childbirth anesthetic that is perfectly safe for both mother and child has yet been discovered, Dr. Gertrude Nielson of Oklahoma City declared at the same meeting.

The much discussed high maternal death rate in the United States is in large part a result of the great increase of the use of analgesics in childbirth,

Dr. Nielson said in a vigorous protest against this practice.

"Childbearing is so essential an experience for a woman that the thwarting of its normal course by the excessive use of analgesics may cause great damage to her personality," Dr. Nielson asserted. "If she is carried through delivery in an unconscious state, she is deprived of the experience of giving birth to her child and in some cases will pay for this escape from reality by nervous disorders.

"In my observation no woman—whether intelligent or unintelligent, modern or old-fashioned—wants the birth of her baby to be a blank in her memory," Dr. Nielson concluded. "Certainly, none will wish to be relieved of pain at the risk of harm to her baby."

At the same session experience with three childbirth anesthetics was reported by various groups of physicians. Four thousand cases in which twilight sleep, a combination of two drugs, scopolamine and morphine, (Turn to next page)

CHEMISTRY

Million "Fingerprints" Of Elements Measured

MORE than a million lines on photographs, each of which is a sort of "fingerprint" of a chemical element, are being measured with unequal accuracy and speed by scientists and WPA workers at the Massachusetts Institute of Technology. Dr. George R. Harrison, M.I.T. professor, described for the National Academy of Sciences this gigantic systematic determination of wavelengths and intensities of the spectral lines of the chemical elements.

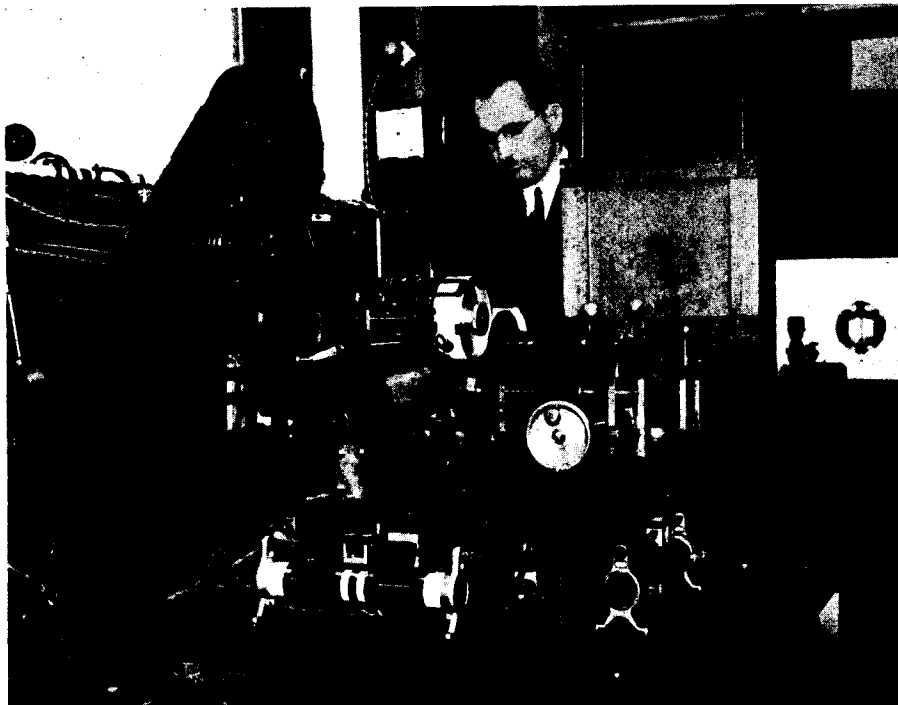
Several million measurements, accurate to one part in 5,000,000 or better, are being made.

A "robot scientist," which is a recently developed automatic wavelength measuring, computing and recording machine, makes the obtaining of data from 20 to 200 times faster.

Precise information on spectra is needed both for the development of chemical analysis by means of light given off by very hot substances and for studies to determine how the atoms of various chemical elements are built.

After the robot machine reads the wavelength and intensities from spectrograms and records them directly on motion picture film, a staff of 60 WPA workers tabulate, correlate and average the output of the machine.

Science News Letter, May 23, 1936



"FINGERPRINTING" ELEMENTS

Dr. George R. Harrison, Massachusetts Institute of Technology professor, is shown here with a "robot scientist"—automatic wavelength measuring, computing and recording machine.

was used, were reported by Drs. Otto S. Krebs, George L. Wulff and Helman S. Wassermann of St. Louis. Pentobarbital-sodium with scopolamine was found a highly effective and simple childbirth anesthetic in 1,800 cases reported by Drs. Charles E. Galloway, Robert M. Grier and Robert Blessing of the Evanston, Ill., Hospital. Successful use of paraldehyde with benzyl alcohol in 600 cases was reported by Drs. Howard F. Kane and George B. Roth, the George Washington University research team who recently announced this method of relieving pain in childbirth. (See SNL, Mar. 7.)

New Meningitis Treatment

A new method of treating meningitis, highly fatal disease of brain and spinal cord which has been increasing alarmingly in recent years, was reported by Dr. Archibald L. Hoyne of Chicago.

In a group of patients treated by the new method, the death rate was only 11.8 per cent, Dr. Hoyne reported. Death rates of more than 40 per cent have been reported for this disease in Chicago every year except one between 1916 and 1933. In certain other cities the death rate has been even higher.

The successful method Dr. Hoyne has used to treat this disease is to inject antimeningococcus serum, or the newer meningococcus antitoxin, into the veins instead of into the spine as was previously done. Dr. Hoyne bases this method of treatment on a new theory he has developed. Meningitis, as he sees it, is a special complication of a general disease of the central nervous system. The meningococcus antitoxin is more effective than the serum, it appears from Dr. Hoyne's report. He gave the serum and the antitoxin to alternate patients and found the fatality rate in those treated with antitoxin less than half that in the serum-treated patients.

The age of the meningitis patients influenced the outcome of the disease, Dr. Hoyne noticed. Patients under 20 years of age had a much better chance for recovery. Heart disease, alcoholism and tumors of the abdomen were factors, besides age itself that handicapped the older patients in their fight for recovery.

Racial Resistance To TB

Decline in tuberculosis cases and deaths during the past decades may be at least partly due to the fact that the human race has built up increasing resistance to this disease. This possibility was discussed by Dr. James Alexander Miller of New York.

Isolation of patients with active tuber-

culosis and improvement in economic and social status have also played their part in bringing about the tb decline, Dr. Miller pointed out. But just as persons build up resistance, so can the race, in his opinion. Resistance depends on four factors: resistance acquired through repeated mild exposures; inherited resistance, which is open to question; accumulated resistance, the sum of the first two factors; and constitutional fitness.

Disease May Disappear

Rheumatic heart disease, serious ailment of young persons, sometimes disappears of itself, Drs. Paul D. White, T. Duckett Jones and Edward F. Bland of Boston reported. They examined about 1,500 patients during the acute stage of this disease and, reexamining them ten years later, found that about sixty of the patients had perfectly normal hearts.

Blind From Reducing Drug

More than fifty young and middle-aged women who took the new and dangerous reducing medicine, dinitrophenol, developed cataract of the eye, Dr. Warren D. Horner of San Francisco reported. The cataracts developed exactly as they do in elderly people. Within a few weeks all the victims can see is the movements of their hands. No treatment has been found to retard the growth of the cataracts, but extraction of the cataracts gives results comparable with this method of treating other kinds of cataracts.

Don't Force Child to Eat

The common maternal mistake of forcing a child to eat was attacked vigorously by Dr. Clifford Sweet of Oakland, Calif.

Malnutrition has been overemphasized until it has become a menace to the peace of mind of mothers, Dr. Sweet declared. The battle waged at many a meal provides an atmosphere for the development of any and every sort of behavior problem.

One method used by Dr. Sweet to study the problem is to have parents let the child direct his own eating for three weeks while the parents keep a record of what and how he eats. The mother often finds that her child is eating more than she thought. Sometimes Dr. Sweet had trouble getting the last week's record because the problem had disappeared and the mother lost interest in keeping the record.

Definite faults in eating can usually be corrected by proper methods, Dr. Sweet indicated. The child who does not like meat usually has not learned to chew it sufficiently to swallow it. Taking away foods the child says he does not like sometimes has a magic effect; he may soon ask for them.

"I am certain," Dr. Sweet concluded, "that no normal healthy child can long resist the demands of his body for food when there is added to it the example of the other members of the family eating the food that appears on the table or omitting it without remark, in an atmosphere of comradeship and enjoyment." (Turn to page 336)

Diet Principles For Mothers

Seven dietary principles for the guidance of mothers were presented by Dr. Clifford Sweet of Oakland, Calif., at the Kansas City meeting of the American Medical Association, as follows:

- 1. One vegetable is as good as another and one meal or even days without a morsel of vegetable is not altogether lost.
 - 2. Meat is a valuable food; while broth has no value except as a vehicle for other foods and cheese adds nothing to the diet except milk.
 - 3. Cereals in the forms of hot mushes gain no values not present in bread, crackers or dry cereal, if only they are sufficiently "whole grain" to retain their vitamin B content.
 - 4. Every child does not need a quart of milk daily and he should receive credit for milk cooked in food.
 - 5. A diet high in fat decreases appetite, prevents digestion and absorption and therefore growth; therefore cream should not be given too freely.
 - 6. Temporary loss of appetite may mean only that the child is not hungry, while a prolonged absence from food is usually the first symptom of illness.
 - 7. The father's duty is to earn the money to buy food and the mother's to put it on the table in sufficient variety.
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Many persons today have infected sinuses as a left-over from the worldwide influenza epidemic of 1918 and are carriers of disease, in the opinion of Dr. M. M. Cullom of Nashville, Tenn. Most of the population suffers from this disease at some time, Dr. Cullom said. A large proportion of those infected are left with a chronic infection that menaces life, health and hearing.

Sinus disease was given inglorious credit for being the source and carrier of the common cold by Dr. Edward C. Sewall of San Francisco who spoke at the same session. Dr. Sewall believes that cold weather has a bad effect on persons with chronic sinusitis, making them active carriers of colds to other persons. The person with sinus disease often has false colds which may be mistaken for true colds. True colds, however, never occur in succession, Dr. Sewall said. The false cold is brought about by chilling which affects the diseased membrane in sinusitis sufferers.

Oil Heals Ulcers

Cod liver oil, valuable remedy for and preventive of rickets in children, is proving its worth in the treatment of slow-healing ulcers. Excellent results in the treatment of such ulcers with a cod liver oil salve were reported by Drs. James R. Driver, George W. Binkley and Maurice Sullivan. They attributed the healing action of the salve to the vitamin A in the cod liver oil. The method was originated by Prof. Löhner working in Magdeburg, Germany.

Gastritis Rediscovered

Chronic gastritis or inflammation of the stomach, once a fashionable disease, has been rediscovered since the invention of the flexible gastroscope, the instrument by which physicians can examine the inside of the stomach. True gastritis was discovered by this instrument in about half of 2,500 patients suffering from abdominal complaints, Drs. Rudolf Schindler, Marie Ortmayer and John F. Renshaw of Chicago reported.

Drink Not Cirrhosis Cause

Alcohol cannot be regarded seriously as the cause of cirrhosis of the liver, in spite of the general opinion that it is, Drs. Russell S. Boles and Jefferson H. Clark of Philadelphia told the meeting. Their conclusion was reached from post-mortem examination of hundreds of patients. The liver condition and the person's drinking habits before death

were compared. Cirrhosis was found more often among non-drinkers than drinkers, and of the drinkers, only about one-fourth had definite cirrhosis. In further support of their theory, these investigators pointed out that the type

of cirrhosis usually thought to be alcoholic occurs in children and other non-alcoholics as well as in certain animals. Furthermore, among Brahmins, who drink very little, cirrhosis is relatively frequent.

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MUSEUM SCIENCE

Arctic Refrigerator Keeps Eskimo Relics Fresh

RAIDING the ice box has a different meaning in the Far North. Perpetually frozen soil of the Arctic makes a natural refrigerator in which archaeologists find Eskimo relics kept fresh for centuries.

Care with which Arctic relics of frozen wood, leather, or feathers should be de-frosted, was urged before the American Association of Museums by Douglas Leechman of the National Museum of Canada. Large objects partly dug out of frozen earth may thaw in the air and become soaking wet overnight, being ruined by splitting and warping before they are even brought to light.

The refrigerated objects greatly assist the archaeologist in forming a true picture of life among the early Eskimos, Mr. Leechman explained. Where the soil is not frozen, Eskimo rubbish heaps may preserve nothing but stone articles, even ivory being disintegrated.

Coins Reveal Their Age

Chemists have found a way to make ancient bronze coins of Athens and other famous cities reveal their age.

Results of precise chemical analysis, showing how the bronze used for coinage in various times and places differed in amount of tin, iron, and other substances present, were reported by Prof. Earle R. Caley of the Frick Chemical Laboratory at Princeton University. He told of finding that bronze coins from Macedon manufactured in the time of Alexander the Great contain considerable tin and very little lead. Greek bronze in general had less tin as time went on, and more lead.

Not only can chemistry provide some idea of the time of manufacture for previously undatable coins, Prof. Caley pointed out, but the age of objects found along with such coins will in future be better determined.

Detection of forgery of ancient bronze can be aided by chemistry, Prof. Caley showed. In authentic ancient

bronze there are almost always weighable amounts of arsenic or sulphur, differing from bronze made under modern conditions of manufacture.

Workers Fingerprinted

To protect its fabulous treasures, New York's Metropolitan Museum of Art fingerprints all employees, and maintains armed guards day and night.

If a picture or other object should be stolen, fingerprints are of greatest assistance, Charles B. Burns of the museum staff declared. Fingerprints left on an art object in normal duties can be quickly identified by having all employees printed, and much time saved in trailing the guilty person.

The fingerprint system, required of all who apply for work, has enabled the museum to detect in advance unsuitable persons with police records.

The day and night armed squads of the Metropolitan engage in annual pistol shooting competitions, Mr. Burns said, and rivalry serves as an incentive to greater skill in handling firearms, which may be needed in emergency.

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The biggest engineering project yet found in Palestine's buried past is the water system constructed at Armageddon during the twelfth century B.C.

● RADIO ●

May 26, 2:15 p. m., E.S.T.

HOT WEATHER THINKING—Dr. John P. H. Murphy of St. Elizabeth's Hospital.

June 2, 2:15 p. m., E.S.T.

WHAT ABOUT TWINS?—Dr. Alan Guttmacher of Johns Hopkins Medical School.

In the Science Service series of radio discussions led by Watson Davis, Director, over the Columbia Broadcasting System.