

MEDICINE

Chemical Checks Leukemia

The chemical 6-mercaptopurine has temporarily checked leukemia, but more research is needed for chemical agents to treat leukemia. Antibiotics are being investigated.

► **TEMPORARY DISAPPEARANCE** of leukemia in more than half the acute cases treated with 6-mercaptopurine (6MP) has been reported by Dr. Henry D. Diamond of Memorial-Sloan Kettering Cancer Center, New York.

In an interview with *SCIENCE SERVICE* Dr. Diamond said that about 50% of the children who get a remission of leukemia in its acute state will live a year, or twice as long as formerly.

Also ranking among the foremost effective drugs in treating acute leukemia are aminopterin and methotrexate, which combat folic acid, and cortisone.

"We need to continue research for chemical agents to treat leukemia," Dr. Diamond said, "and we are at present delving into antibiotic products on an experimental basis. So far we have found no better effects than we have had from 6MP.

"We must learn more of the process of

the disease to get a more rational approach to treatment," he said. Advice for leukemia prevention is limited to warning against irradiation exposure and exposure to benzol, a volatile liquid hydrocarbon found in chemical industries.

Leukemia is cancer of the blood, which is characterized by disorderly and uncontrolled growth of the white blood cells. It accounts for nearly 10% of reportable cancer cases in Connecticut. This state is cited because it has the best cancer statistics in the country. The law requires that cancer be reported there.

Dr. Diamond opened the 1960-61 series of programs sponsored by the St. George Society, composed of medical students from the three schools of medicine in Washington, D. C. The programs are in cooperation with the Washington American Cancer Society.

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MILITARY SCIENCE

Test One-Man Missile

► **ASSESSMENT TRIALS** of the Vigilant, a new type of British anti-tank missile light enough to be carried by one man, are planned for early next year. Vigilant (short for the full designation, visual guided infantry light anti-tank weapon) has been developed over the past three and a half years as a non-government project by Vickers-Armstrong (Aircraft) Ltd. It is a wire-guided missile and has no control box or other auxiliary gear.

The missile is launched from its carrying

box and guided by a hand-held sighting device. It is claimed to be ready for instant use since no field assembly or testing is necessary. The total system weighs about 45 pounds and, in preliminary tests, it has been successfully dropped with and operated by paratroops.

So far it has cost about \$3,000,000 to develop the missile. Vickers-Armstrongs became part of the British Aircraft Corporation in the recent mergers affecting the British aircraft industry, and Eric Beverley



MISSILE READY FOR LAUNCH—Directly from its carrying case.

of BAC said his company hoped to achieve mass production of Vigilant at low cost. It could be in service by mid-1961.

Not only is Vigilant a handy infantry weapon, but its small size and weight make it readily adaptable for fitting to light reconnaissance and other fighting vehicles.

Its special feature is its accurate and easily operated control system. The average soldier can learn to use it quickly, five hours of simulator training being normal.

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LARGE EARRINGS—This Lydian aristocrat wears purple garments and large earrings on a terracotta frieze, found recently by a Harvard-Cornell expedition beneath the ruins of Sardis, Turkey. The frieze dates from the sixth century B.C. when Sardis, ancient capital of Lydia, was destroyed by the Persians.

DENTISTRY

Mouthwash Advertising Condemned by Dentist

► **MOUTHWASH ADVERTISING** gives the public a false sense of security about the health of their gums, Dr. Alvin C. Hileman, chairman of periodontics at the College of Physicians and Surgeons School of Dentistry, San Francisco, has charged.

Mouthwashes and lozenges only mask or suppress symptoms rather than cure periodontal, or gum, disease, Dr. Hileman told the American Dental Association's meeting in Los Angeles. Citing "before" and "after" photographs in magazines, he said that cessation of bleeding and improvement of gum color are not the sign of a cure.

He pointed out that the repeated use of products encouraged by advertising invites deeper destruction of supporting tissues before a dentist is consulted about the underlying cause of the trouble. "Remarkable" results are claimed after one or two weeks.

Once the mouth feels good again, Dr.

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Hileman said, many people never get around to seeing their dentist about a complete cure. A cure, he said, will correct the deformity and change the surrounding condition that caused it. He urged the general practitioner of dentistry to develop a "periodontal awareness" from the first examination to the finished oral rehabilitation.

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Gum Disease Serious

➤ A "DAILY FLOOD" of misinformation in advertising has falsely led the public to believe that teeth are lost primarily because of tooth decay, a Navy dentist has charged. This is not true, he said—more teeth are lost to gum disease than to all other causes.

Dr. Samuel Goldhaber, a captain in the U. S. Navy Dental Corps, told the American Dental Association meeting in Los Angeles that, despite the efforts of individual dentists and the ADA to inform the public of periodontal (gum) disease, "the voice of the dentist has been all but drowned out."

The "fantastic claims" and the "constant ballyhoo" of advertising has not only focused attention entirely and exclusively on tooth decay, but has also encouraged the neglect and inadequate hygiene that invite periodontal disease.

"The shocking fact is that most people do not keep their mouths really clean enough to keep them healthy," Dr. Goldhaber said.

Periodontal disease starts when the gums become inflamed. The gum swells away from the tooth and small open pockets are formed between tooth and gum. Bacteria collect in these pockets and the toxins they produce eat away the fine filaments that connect the tooth to the gum and bone. The pocket deepens, sometimes extending as deep as a fifth of an inch, the foundation of the tooth weakens, and eventually the tooth is lost.

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Hypnosis in Dentistry

➤ IT TAKES months or years of closely supervised study to learn who should or should not be hypnotized, Dr. Sidney Epstein, University of California School of Dentistry lecturer in psychology, San Francisco, told the American Dental Association meeting in Los Angeles.

Anxious and emotionally disturbed persons should not be hypnotized, Dr. Epstein warned, adding that student hypnotists are not cautioned that such people do not carry identifying cards. Hypnosis may be like opening a Pandora's box for these sick people and precipitate a real psychotic episode.

The average dentist or physician can learn how to hypnotize a person in 15 to 30 minutes, Dr. Epstein said, but such short-term courses do not give the necessary training in psychology and human behavior.

The partially trained hypnotist is tempted into helping the patients to control such

habits as tooth grinding and nail-biting, Dr. Epstein pointed out, warning that to "release a patient from one set of behavior patterns may release a more serious set."

He said there are disadvantages to using hypnosis in daily practice even when the hypnotist is properly trained.

Only five to 26 percent of the public can achieve satisfactory sedation with hypnosis alone. In addition, patients who can be hypnotized effectively require a considerable investment of the dentist's time and energy to be indoctrinated or trained to hypnosis.

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