

## MEDICINE

# Urge Cancer Surgery

Scientists have reported that even short delays in surgery for suspected cancer of the breast, following biopsy, may be followed by recurrence of the disease.

► IMMEDIATE surgery for suspected breast cancer patients was urged when biopsy establishes cancerous growth.

The great danger in waiting a few days between biopsy and surgery was called to the attention of the International Cancer Congress meeting in London by Drs. Carlos Sayago and D. Sirenbrenek of Santiago, Chile. (See pp. 35, 36, 38.)

Two experimental groups studied revealed that of 40 operable breast cancer cases that experienced an average delay of 33 days between cancer diagnosis by biopsy and radical mastectomy, only nine cases were clinically free of the disease after a five-year period. Among 40 cases of biopsy followed by immediate surgery, on the other hand, 34 were free of the disease after a five-year period.

In addition, breast cancer patients undergoing surgery should be previously treated with hormones to restore normality to cancer-caused neuro-endocrine imbalance, Drs. Dutu Rosner, J. Lupovici and R.

Schreiber of the Oncologic Institute, Bucharest, Rumania, told the Congress.

They also suggested simultaneous therapeutic treatment for hypophysis, thyroid, adrenals and ovary by employing pre-operative radiation and hormones.

A combination of nitromin, nitrogen mustard-n-oxide, and prednisolone in the treatment of advanced cancer patients can bring "dramatic" immediate relief of symptoms, Dr. Basil A. Stoll of Melbourne, Australia, reported.

Of 18 cases of breast cancer which spread to the lungs, 13 showed objective control over the disease activity limited to a six-month period. In 53 nonbreast cancers a combination of prednisolone and nitromin yielded no objective benefit although a subjective benefit was noted.

## Leukemia in Mouse

► AN ANTIBIOTIC that cures a virus-caused leukemia in mice has been perfected.

The virus was discovered three years ago. It causes a form of leukemia that is similar to the spontaneous disease that takes the lives of thousands of humans annually.

The virus-killing antibiotic is Mitomycin C, Drs. Kanematsu Sugiura and C. Chester Stock of the Sloan-Kettering Institute in New York reported at the Cancer Congress. Three nitrogen mustard-like chemicals, TEM, myleran and 1,9-di(methanesulfonyl)nonane, also inhibited development of the leukemia, they reported.

Formerly, chemical combinations had cured only transplanted animal cancers.

The antibiotic and the chemicals completely inhibited the development of the leukemia in 100% of the animals that had been injected with the virus one day before. They apparently cured 50% of the animals that had been given leukemia seven days before treatment; no leukemic cells were found although slight amounts of virus were still detected in some mice.

Mitomycin C already has been found to be effective in curing 16 different types of transplanted animal cancers. The antibiotic was discovered in Japan and is being tested at the Sloan-Kettering Institute.

To date there is no known cancer in man that has definitely been shown to be virus caused. However, should virus be linked as a causative agent in the future, this new antibiotic may prove helpful in developing a virus-caused cancer antibiotic.

Science News Letter, July 19, 1958

## ENTOMOLOGY

## Discover More Wasps That Lay Eggs in Live Host

► BABY WASPS that hatch in a safe, warm world where there is always lots of food, inside the body of another insect, are described in a new bulletin published by the Smithsonian Institution.

Two new genera and approximately 30 new species of these wasps, members of the family Braconidae, found chiefly in subtropical America, are reported by C. F. W. Muesebeck, an honorary collaborator of the Institution.

The female deposits her eggs inside the host insect, usually a caterpillar, by means of an organ called the "ovipositor" which penetrates the host's skin. By some strange provision of nature, Mr. Muesebeck explains, the larva never feeds on, or injures in any way, any of its host's vital organs.

The larvae instinctively eat only fats and body fluids that are nonessential to life. The host may outwardly look healthy.

However, as soon as the larva changes into an adult, the four-winged wasp breaks through the insect's body walls, usually killing it. This period of metamorphosis usually takes about two to three weeks.

Sometimes if the host insect is dormant, as in the winter time, the larva also remains dormant. Development is at a standstill until the host becomes active again.

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New chemical *glues* with remarkable powers of adhesion may some day antiquate today's nails and rivets.



**MEDICAL DOLL**—A life-like doll used in nurses' training breathes and its visible "lungs" respond as do a human being's when oxygen is administered. The special doll and rescue unit were developed by National Cylinder Gas Division of Chemetron Corporation. Nurses practicing oxygen resuscitation at St. Francis Hospital, Milwaukee, Wis., are Mary Hamm, Loretta Lillie and Mary Lukomski.