

MEDICINE

Infection Cures Blue Baby

Severe inflammation of the heart caused scarring and eventual closing of the opening left at birth between the pulmonary artery and aorta.

► AN UNUSUAL case of a "blue baby" heart patient whose heart defect apparently was cured by a severe infection is reported by Drs. Noah H. Chiles, Harry L. Smith, Norman A. Christensen and Joseph E. Geraci of the Mayo Clinic.

About one in 100 patients recover spontaneously from the heart infection, subacute bacterial endocarditis, when this develops in a person with acquired heart disease or with a heart defect present at birth.

The patient reported by the Mayo doctors had the heart defect known as patent ductus arteriosus. The opening between the pulmonary artery and the aorta did not close at birth as it normally does. This patient did not show any signs of being a blue baby, however. The heart defect was not discovered until he was eight years old when a school nurse referred him to the doctor because she heard a to-and-fro machinery-like heart murmur which made her suspect heart disease.

For the next 10 years the lad was perfectly well. Then he had an attack of what was first thought to be influenza. Even

then, although he had fever, night sweats, lost appetite and weight and was pale and tired, he did not have such heart defect signs as blue skin, shortness of breath, cough or clubbed fingers or toes.

It was decided that he had subacute bacterial endocarditis complicating the heart defect. Since this was back in 1938, he was treated with sulfa drugs, but these did not help. For a year and a half he was very sick, but in 1941 began gradually to get better. In 1942 he was well enough to risk having his severely diseased tonsils removed.

Since 1945 he has had no heart murmurs and has been perfectly well. His heart is normal in size. He carries on with his work as manager of a lumber company without trouble.

Apparently the severe inflammation of the heart was so extensive that it caused scarring and eventual closing of the opening between the pulmonary artery and aorta.

Details of the case were reported at a staff meeting of the clinic.

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MEDICINE

Cancer Cure Sought

Byproduct of penicillin manufacture, formerly thrown away, to be tested as possible "selective lethal factor for malignant cells."

► ARE PENICILLIN manufacturers throwing down the drain a chemical with a one-in-100 chance of curing cancer?

Dr. Ivor Cornman of George Washington University and the American Cancer Society, which supports his work in part, think they are. They held a press conference in Washington to explain the situation and, apparently, with the hope of spurring manufacturers to supply Dr. Cornman with more of the material for his research.

On the other side of the picture, SCIENCE SERVICE learned the following:

Manufacturers would have to invest from \$20,000 to \$60,000 or stop normal penicillin production for several months. Then, because strains of penicillin change, they might not get the material Dr. Cornman wants. And if they did get it, the odds still are, as Dr. Cornman says, 100 to one against it ever becoming a cure for cancer. Furthermore, other antibiotic material, al-

ready available in pure crystalline form, has been reported showing similar or greater anti-cancer activity in some experiments.

The unidentified chemical from penicillin waste which Dr. Cornman wants will, in test tube experiments, kill cancer cells without killing normal cells. It merely slows the growth of the latter. Dr. Cornman calls it the "selective lethal factor for malignant cells."

In 1944 Dr. Cornman, then working with Dr. Margaret Lewis at the Wistar Institute, Philadelphia, reported that penicillin had this selective lethal effect on cancer cells. Hopes were pretty high, because a chemical of this sort had long been and still is a goal of cancer fighters.

But penicillin in those days was relatively crude and impure. When manufacturers changed their methods to produce a purer penicillin, the material lost its anti-cancer activity. Ever since, Dr. Cornman off and

on has been looking for the anti-cancer material.

Two pharmaceutical houses have supplied Dr. Cornman with material for his latest experiments. Using a process called counter-current distribution, they broke their penicillin waste into some 20 fractions. Of these, five showed anti-cancer activity. But the amount of material Dr. Cornman got was so small he could not even try it in mice with cancers, much less test it for toxicity or have its chemical composition studied.

He and the American Cancer Society are still hoping to get more of the material.

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MEDICINE

Measure Legs to Detect Dangerous Vein Clots

► A GROUP of 369 healthy, professional bus and truck drivers have had their calf girths measured to help doctors learn more about fighting dangerous blood clots in the lungs.

Surprisingly, these men who use the right leg 99% of the time but the left leg only 48% did not have any greater difference in calf girth size than other groups of normal men measured. The right calf girth was larger than the left in both the truck and bus drivers and the healthy men of other occupations.

In healthy women measured, however, the girth of the right calf measured just about the same as that of the left calf.

The studies are reported by Dr. Albert Damon of Columbia University's College of Physicians and Surgeons, New York, and Dr. Ross A. McFarland of Harvard School of Public Health, Boston, in the *Journal of the American Medical Association* (Oct. 17).

Reason for their study is that calf measurements can be valuable for detecting early thrombophlebitis, or clots in leg veins, which in turn may herald fatal clots in lung arteries or hidden cancer.

The doctors hoped to get a basis of normal differences in left and right calf girth from which to judge abnormal differences in patients. They report that, for practical purposes, if a man's right calf measures 15 millimeters larger or smaller than his left, and a woman's 12 millimeters larger or smaller, it points to a diseased condition. (One millimeter is about four hundredths of an inch.)

Such measurements, the doctors point out, may also be valuable in diseases of nerves and muscles and in cases of bone or joint damage from disease or injury. On this point they state:

"In poliomyelitis, arthritis, osteomyelitis and the muscular atrophies and dystrophies, such measurements can help diagnose current or previous disease, the extent of damage, and the progress of disease or therapy."

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The cheetah, a leopard-like animal, can cover 70 miles of ground an hour.