

MEDICINE

Thalidomide Birth Control

Thalidomide research, stimulated by monkeys that had no pregnancies after treatment, should lead to the development of an inexpensive birth control pill—By Faye Marley

► AN INEXPENSIVE birth control pill should result from research on thalidomide, if a discovery made in preliminary monkey experiments applies to humans.

This prediction was made by Dr. Jerold F. Lucey of the University of Vermont College of Medicine. He told SCIENCE SERVICE by telephone that although he is not trained for birth control research, his work with the baby-deforming drug shows others should undertake further studies.

No pregnancies occurred in the group of monkeys that had been given doses of the tranquilizing drug. Dr. Lucey worked with more than 100 animals in the monkey colony at San Juan, Puerto Rico, with Dr. Richard E. Behrman of the National Institutes of Health, who is located in San Juan.

Instead of producing deformed offspring, the thalidomide-treated monkeys, which formerly had demonstrated fertility with repeated successful conceptions, had neither offspring nor abortions during the period of mating that followed their dosage.

The theory suggested by the researchers is that the drug killed fertilized embryos in the early stage before they were imbedded

in the uterine wall. This process is called implantation.

Previous research on animals has been concerned with the effect of thalidomide on the developing embryo. This is the first study that showed the drug's effect immediately after conception in primates.

Because monkeys are the closest to man of any type of animal, the investigators believe that sensitivity to thalidomide is similar in both. It is possible that some human embryos of pregnant women who took thalidomide were killed before they developed deformities. Drs. Lucey and Behrman used a dose of thalidomide close to the estimated amount required to produce human deformities. The monkeys, like humans, showed no sleepiness or other signs of toxicity. Three of the monkeys treated were remated six weeks after the study and became pregnant, it was reported in *Science*, 139:1295, 1963.

"We believe that thalidomide, under these conditions, killed the embryo prior to implantation," the researchers said. This means during a period of six to ten days.

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Stanford University

UNUSUAL "MOTHER"—About 16 months ago Maisie's heart was completely removed and stitched back in place by Dr. Edward J. Hurley of the Stanford School of Medicine. Although without circulation for 77 minutes while a heart-lung machine took its place, her heart was apparently unaffected by the stress of delivering her pups later.

GENETICS

Some Goiters Inherited, Family Study Indicates

► SOME GOITERS may be inherited, a study of one family indicates. The new evidence is based on the discovery of a hereditary factor in a rare inflammatory disease of the thyroid gland, Hashimoto's disease.

The gene, or hereditary unit, for the goiters of two sisters appeared to exist in some family members without thyroid disease symptoms, Harvard Medical School and Massachusetts General Hospital scientists found at Boston, Mass.

In Hashimoto's thyroiditis, the patient produces antibodies that attack his own thyroid. In trying to overcome the antibody attack, the gland enlarges a great deal. What starts the antibodies on their thyroid-destroying spree is one of the most actively pursued problems in thyroid research, but part of the mystery will be solved if further studies confirm the finding of the hereditary factor. Tests on the family of the two sisters with Hashimoto's disease revealed that the children apparently received a double dose of the gene responsible for their condition—one from each parent.

Through radioactive iodine tracer studies, a small abnormal protein was found in the thyroid glands or in the bloodstream of all members of this family. Most patients with Hashimoto's thyroiditis have the abnormal protein.

Drs. Leslie J. DeGroot, William V. McDermott, Reginald Hall and Miss Ann M. Davis reported the findings of the study, which was supported by the American Cancer Society.

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SURGERY

Varicose Vein Surgery

► VARICOSE VEINS, usually associated with old people or pregnant women and excessive weight, sometimes appear in teenagers in advanced form and require surgery, the American Academy of General Practice was told in Chicago.

But the simplest operation should be used, reserving possible additional surgery for later life. Treatment by injection of one of the various solutions, such as 50% dextrose or 20% saline, should not be used alone, but with surgery, Dr. Edward A. Edwards of Harvard University Medical School told SCIENCE SERVICE. Treated by injections alone, such young people will have more trouble later, he said.

Asked if surgery should ever be used on varicose veins of a pregnant woman, the specialist in blood vessel surgery said the only reason for this is in cases when the veins are complicated by a blood clot. Usually surgery should be postponed until after pregnancy, and the patient can be made comfortable by wearing elastic stockings.

Older persons often have varicose ulceration with hardening of the arteries. Gangrene may set in because of insufficient arterial blood supply. Because of this danger, prompt surgical treatment should be given.

In surgery the diseased and ineffective vein is removed and the blood is automati-

cally rerouted through neighboring veins that can do the job more effectively.

Although varicose veins were treated as long ago as 400 B.C. by Hippocrates, the Greek physician called the father of medicine, Dr. Edwards said the cause is still unknown.

He advised family physicians to take particular care in diagnosing the symptoms commonly associated with varicose veins. The symptoms are enlarged blood vessels, excess fluid in the tissues, pain in the limbs and chronic ulceration of the vessel walls. But these symptoms may come from a variety of disorders that may not even be related to the blood vessels.

Enlarged veins near the surface of the skin, for example, may indicate a tumor made up of blood or lymph vessels, called angioma. Pain in the legs may be caused by imperfect posture or spinal arthritis. Excess fluid in the tissues may be of lymphatic origin or it may indicate a pelvic malignancy. And sores or ulcers on the leg may stem from a simple pus-forming infection.

But when varicose veins are present, Dr. Edwards said, the "consensus is quite firmly for the use of surgery," not only for the veins themselves but for their complications.

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