MEDICINE

Fertility Restored in Men

A California doctor has perfected a technique that holds hope for sterile men. A plastic disc placed in the front chamber of the eye is restoring sight.

THERE IS new hope for men who have had surgical operations for sterilization. A California doctor has perfected a hollow-splint technique to restore fertility in such cases and so far it has been successful.

Dr. Stanwood S. Schmidt, a urologist practicing in Eureka, Calif., told the American Medical Association in Miami Beach, Fla., that presently established techniques failed 50% of the time, usually because the sperm tube becomes blocked again.

In sterilization, the vas deferens, or sperm tube leading from the testis to the storage capsule, is cut or tied shut in the middle. The tied end closest to the body becomes bulged a little, probably because of a slight pressure from spermatic fluid in the testis. The operation is performed on both sperm tubes.

In the usual restoring operation, the tied ends are reopened and rejoined, bulged end to smooth end. This makes a crooked joint around which spermatic fluid collects, hardens and eventually plugs up the tube again.

This crooked rejoining and the blocking by calcified spermatic fluid is the cause of most of the failures, Dr. Schmidt said.

In his new technique, developed in dogs under a grant from the Population Council, Inc., Dr. Schmidt cuts out the bulged section, about half an inch long. He then inserts a tiny polyethylene tube through the skin, into the vas deferens and passes it down past the spot where the cut ends are later sewed together.

This hollow splint not only insures a straight joining, but also allows the spermatic fluid to by-pass the sewed spot and drain off into the bandages.

In about ten days the ends have healed together smoothly, the polyethylene splint is removed and fertility has been restored.

In Dr. Schmidt's experiments with young male dogs, microscopic examination of the vas deferens and its surrounding tissue showed no more inflammation than any other clean wound 30 days after operation, indicating that the polyethylene is not reactive. There was no calcification of spermatic material.

Although not yet widely used, the technique has been tried in a few men and has been satisfactory. Dr. Schmidt believes doctors can now tell patients that surgical sterilization in men no longer need be permanent.

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Lens Restores Sight

A METHOD for restoring sight to the blind and nearly blind was described to the American Medical Association meeting in Miami Beach, Fla.

The operation consists of implanting a plastic disc, about five millimeters in diameter, in the front chamber of the eye, between the eyeball covering and the iris. It is, in effect, something of a substitute lens placed inside the eye, rather than outside like a contact lens.

Because the technique is not yet used in the United States, Dr. Benedetto Strampelli of Italy and Dr. David P. Choyce of England were asked to report ther experience with the technique to American doctors.

Dr. Strampelli, who began using the technique in 1953, said his surgical procedure was to cut away a tiny part of the iris and then sew the "lens" in place, by hooking fine threads to the lens supports, attached at top and bottom. The operation is somewhat like hanging a round picture at the eye's front.

The original, and still most frequent, use for the method is in persons born without eye lenses, a condition known as aphakia.

Dr. Choyce, a consultant ophthalmic surgeon to London area hospitals, said that in 200 of the 250 cases he has treated since 1956, six have been failures resulting in loss of the eye. Some patients were given near-normal vision while others benefited by being able to perceive light and darkness.

Of the 200 cases, the second 100 cases showed better results than the first. Dr. Choyce said he now has a better idea which cases will respond favorably and is selecting accordingly. He has also improved the surgical technique.

"Implants," as Dr. Choyce prefers to call the discs, have been successful in cases other than aphakia.

An 18-year-old who had cataracts removed from both eyes as an infant was blind and had learned braille, but with implants in both eyes he can now read and write normally.

Similar procedure has proved effective for elderly patients with cataracts in both eyes.

In another case a nine-year-old girl was becoming progressively nearsighted. Family history indicated she would be blind before age 30. Implants in both eyes allowed her to continue school. Whether blindness was halted or merely slowed remains to be seen.

The disc has been used to protect the iris from surgical scratching during operations to replace badly fogged or scratched eye-covering. When the covering is healed the implant is removed.

Although American physicians do not use the implant at present, they have been aware of it for some time. Several have written Drs. Choyce and Strampelli to suggest new uses. Both doctors cautioned against overworking the implant because the technique is still far from perfect and should be used in only one eye if possible.

Science News Letter, July 2, 1960

Contact Lens Dangers

THE AMERICAN Medical Association, long unofficially at odds with optometrists over contact lens fitting, has made its position official.

A resolution adopted by AMA's policy-making House of Delegates at the annual AMA meeting in Miami Beach, Fla., states that "the use of such lenses (contact) is not entirely without hazard; . . . the fitting of contact lenses is a proper medical function of the physician; (and) that this House views with grave concern the indiscriminate use of contact lenses."

The resolution as it now stands is a milder version of the original submitted by Dr. Ralph O. Rychener, ophthalmologist at the National Medical Foundation for Eye Care in New York.

In the 11-paragraph original, Dr. Rychener narrowly missed calling the practice of contact fitting by optometrists dangerous. An excerpt reads: "The use of contact lenses can at times lead to serious permanent impairment of vision. The proper application of contact lenses requires, as much as does the use of drugs or surgery, a knowledge . . . which can be acquired only by a medical training."

In closed-door sessions a subcommittee seeking to avoid "legal trouble" from optometrists, licensed by their home states to fit contacts, drafted a less strongly-worded resolution.

It was with Dr. Rychener's consent that the new, five-paragraph version was submitted to and accepted by the House.

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Predict Heart Attacks

A RADIOACTIVE TECHNIQUE for measuring the flow of blood through the human heart—one way to tell how well it is working—was shown at the annual meeting of the American Medical Association in Miami, Fla.

The two physicians who devised the method, Drs. Philip C. Johnson and Gunnar Sevelius of Oklahoma City, have begun a study to determine if it can be used to predict a predisposition to heart attacks.

". . . one of the most pressing unsolved medical problems of today is the finding of a way to evaluate the status of coronary circulation in patients without symptoms or complaints," they said.

The researchers said their method was developed over the past two years as part of a program for testing the effectiveness of various types of drugs used in treating coronary disease.

They found that after administering a nitrate, such as nitroglycerin and peritrate, it was possible to monitor the radioactivity of the drug within the heart by placing a device called a scintillation detector on the chest of the patient.

By a mathematical formula, using the time it takes for this activity to affect the right and left sides of the heart and the heart muscle, it is possible to determine the coronary blood flow and the amount of blood pumped through the heart.

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