CORONARY BYPASS PIONEER

▪ On May 9, 1967, an Argentinian surgeon working at the Cleveland Clinic grafted a segment of saphenous vein between the aorta and a point downstream from a total occlusion in the right coronary artery of a woman who had suffered typical angina for three years. After an uneventful recovery the patient lost her symptoms and cardiovascular surgeons gained a new method of revascularizing ischemic myocardium. The operation was performed in at least 25,000 patients in the United States in the past year, but it is currently the subject of considerable debate.

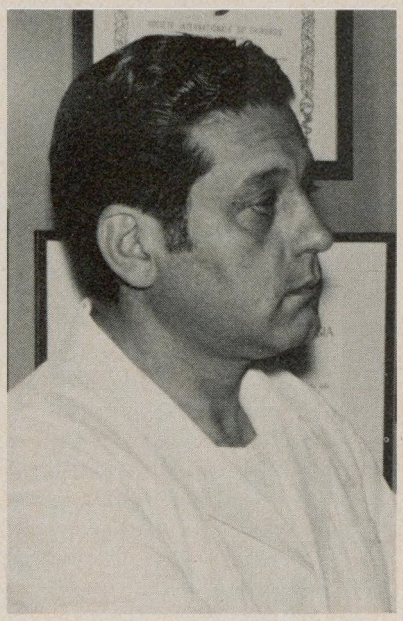
Although aortocoronary bypass grafts have improved the quality of life for 70 to 90 percent of patients with uncomplicated angina, surgeons do not agree on the indications for the operation and some believe that it may hasten the progression of coronary lesions. Collaborative studies are under way in many centers to determine the long-term benefits of the procedure and criteria for patient selection.

Dr. René G. Favaloro, the renowned pioneer of the procedure,* developed a routine technique for bypassing all the areas in the coronary circulation by single or multiple bypasses. In 1968 he was able to perform emergency bypass operations on patients with impending and acute myocardial infarction. He has also performed combined simultaneous procedures involving reconstruction of the left ventricle and valve replacement. Now associate professor at the University of Cordoba and chief of thoracic and cardiovascular surgery at the prestigious Güemes Clinic in Buenos Aires, Dr. Favaloro often performs four open-heart operations a day. Last month in London he was a guest speaker at the International Congress on Diseases of the Chest and this month his extensive contributions are being discussed at the World Congress of Cardiology.

* In November 1964 at Houston's Methodist Hospital Dr. H. Edward Garrett performed an unplanned aortocoronary saphenous vein bypass when he was unable to repair a severely diseased coronary artery with a patch graft, but Dr. Garrett, who is now at the University of Tennessee in Memphis, did not repeat the operation before it was independently introduced by Dr. Favaloro.

MD PROFILE

Criteria and Techniques. The importance of high-quality coronary cineangiography in evaluating patients for saphenous vein bypasses is constantly emphasized by Dr. Favaloro. He considers severe total or subtotal occlusions, with good distal runoff, in any major branch of the coronary arteries indications for the operation. While the ideal patient's ventricle is normal as demonstrated by cineventriculography, he believes that some cases with ventricular abnormalities are acceptable for revascularization surgery and during the past year he and his associates have been more aggressive in treating acute myocardial infarction surgically.



Dr. René G. Favaloro

Dr. Favaloro attributes the relatively low three percent mortality in 2200 coronary bypass grafts that he and his associates performed at the Cleveland Clinic and 750 at the Güemes Clinic to the cooperation of medical and surgical teams in treating patients. Standardized surgical methods have reduced the operation time and methoxyflurane anesthesia helps prevent cardiac depression while normothermic extracorporeal circulation with the hemodilution technique and generously administered nitroglycerine promote tissue perfusion. Continuous nasotracheal intubation and controlled ventilation for the first 24 hours insure optimum oxygenation and the liberal use of vasodilators postoperatively prevents coronary spasm. Blood volume is evaluated postoperatively to avoid overloading the circulation and serum potassium levels are determined before, during and after the operation to correct hypokalemia that often causes ventricular arrhythmias.

Country Surgeon. Before René Gerónimo Favaloro developed his sophisticated approach to the surgical treatment of coronary atherosclerosis, he was a country doctor for 11 years. He was born July 14, 1923, in La Plata, where he received his baccalaureate before he was 18 and, after serving as a lieutenant in the army, his M.D. in 1949. He took his internship and surgical residency at Policlinic Hospital in La Plata and postgraduate courses in general surgery at Rawson Hospital in Buenos Aires before he entered private practice.

In Jacinto Arauz, a small rural community in La Pampa province, he and his brother Dr. John J. Favaloro opened a clinic where they provided medical, emergency and surgical care for the hard working farmers in the area. Isolated from an urban medical center, the young physicians managed to keep abreast of advances reported in the literature. Although they were on call day and night, Dr. René Favaloro remembers these years with great pleasure and still prefers the open spaces to big cities.

Early in 1962 his interest in the surgical treatment of acquired heart disease brought him to the United States on a "visit" that extended for a decade at the Cleveland Clinic. First as an observer, then a junior fellow, senior fellow and chief resident, he learned thoracic and cardiovascular surgery from Dr. Donald B. Effler and spent long hours studying cineangiographs in Dr. Frank Mason Sones' vast film library. Dr. Effler later wrote that Dr. Favaloro was "the dream resi-