

infarct. Patients with metabolic acidosis were predisposed to cardiac dysrhythmias. However, this was considered to be related to the greater severity of their illness rather than the direct result of acidosis, since correction of the acidosis did not correct the dysrhythmia in spite of improved general patient condition. (Anderson, R., and others: *Relation Between Metabolic Acidosis and Cardiac Dysrhythmias in Acute Myocardial Infarction*, *Brit. Heart J.* 30: 493 (July) 1968.)

**INTRAVENOUS LIDOCAINE** In eight patients who were not in shock and did not have complete heart block or significant arrhythmia, but who had had moderate or severe myocardial infarction in the preceding 24 hours (two later died), intravenous injection of 100 mg lidocaine over a five-minute period had no significant effect on cardiac output, heart rate, systemic blood pressure or pulmonary artery pressure. (Stannard, M., and others: *Haemodynamic Effects of Lignocaine in Acute Myocardial Infarction*, *Brit. Med. J.* 1: 468 (May) 1968.)

**LEFT VENTRICULAR FUNCTION** Left ventricular function was studied in seven dogs following establishment of a large systemic arteriovenous fistula by means of a side-to-side infrarenal aortocaval anastomosis. The mechanical properties of left ventricular contraction were evaluated in terms of tension, velocity, length and time, and the results were compared with those obtained in a group of normal dogs studied previously. Both groups were sedated with morphine, promazine and promethazine at the time of study. As would be expected, dogs with A-V fistulas had high left ventricular end-diastolic pressures, high ejection fractions (stroke volume divided by end-diastolic volume), circulatory congestion and marked fluid retention. All dogs developed moderate ventricular hypertrophy even though left ventricular contractility was depressed below the normal range in only one of the seven. Mechanisms for fluid retention resulting in circulatory congestion were activated because of the large hemodynamic burden in spite of normal myocardial contractile properties. (Taylor, R. R., Covell, J. W., and

Ross, J., Jr., *Left Ventricular Function in Experimental Aorto-Caval Fistula with Circulatory Congestion and Fluid Retention*, *J. Clin. Invest.* 47: 1333 (June) 1968.)

### MYOCARDIAL REVASCULARIZATION

Change in concepts of anesthesia for myocardial revascularization has been a factor in improved surgical results. The change from "light anesthesia" to relatively deep and steady levels of anesthesia using methoxyflurane coupled with long-acting muscle relaxants virtually eliminates cardiac arrhythmias and allows the surgeon to manipulate the heart with little effect upon basic cardiac rhythm. As a result, operating room deaths, particularly during the implant procedure, do not occur. Vasodilators (nitrites) are used routinely throughout the operative and postoperative period. Hyperactivity of patients during the critical awakening period from anesthesia predisposes to ventricular fibrillation. Heavy sedation is therefore recommended in the early postoperative period. Respirations are mechanically assisted to prevent hypoxia and hypercarbia. Endotracheal tubes are often left for 24 hours or longer following surgery. A change from an abrupt awakening to a long controlled return to consciousness seems to have reduced appreciably the stressful factors that provoke undesired coronary spasm. (Effler, D. B.: *Anesthesia in Revascularization Surgery—A New Advance* (Editorial), *J. Thorac. Cardio. Surg.* 56: 163 (Aug.) 1968.)

ABSTACTER'S COMMENT: Though Dr. Effler's statements are based on extensive clinical experience, we know of no objective studies to indicate that light anesthesia, *per se*, predisposes the heart to arrhythmias. Relatively deep anesthesia with methoxyflurane or other potent anesthetic agents has definite, well-documented myocardial depressant effects, particularly in the presence of myocardial disease. The addition of vasodilators like nitrite can precipitate hypotension and compromise coronary circulation. There is some merit to gradual awakening and postoperative assistance of ventilation, though we fail to see why this should be true following revascularization procedures more so than following other types of cardiac surgery.