pletely alleviated the morphine abstinence syndrome in men. It prevented the appearance of signs of physical dependence in men who were proven to be addicted to morphine.

Signs of Methadon abstinence syndrome are weakness, fatigue, anxiety, abdominal discomfort, anorexia, insomnia, slight fever, elevation of systolic blood pressure, tachycardia, depression of caloric intake, slight loss of weight, and alterations of glucose tolerance curves. These appeared the third day of abstinence and reached maximum intensity on the fifth to ninth day and subsided by the tenth or twelfth day. Signs of abstinence are mild in intensity.

Methadon should be classed as an addicting drug for four reasons: (1) Persons with known narcotic experience get a satisfactory subjective reaction from the drug. (2) Drug suppressed completely morphine abstinence syndrome. (3) It can be instituted satisfactorily for morphine in cases of known morphine addiction. (4) It produces a real, prolonged but mild withdrawal picture.

J. L. D.


"For reasons not altogether clear, a seriously wounded man, or a man depleted by blood loss during surgery, can often be resuscitated once with easy success, resuscitated to the point where he will tolerate the further strain of surgery. If he be allowed to slip into shock again, a second resuscitation is oftentimes either inadequate or impossible. Every surgeon who has dealt with these problems knows the importance of operating when the patient has achieved the best state he can in the minimum time. . . . In the treatment of shock as a preliminary to surgery we can restore blood volume and blood pressure to normal. This is possible. But is it necessary? We do not need to guess here, for we have a certain answer. It came out of work during the war. It is 'No.' 'No,' at least for organically sound individuals. We do not need to restore the blood volume and blood pressure to normal as a preliminary to safe emergency surgery. . . . "

"The signs we need to guide us are trends rather than absolutes: most important are blood pressure and the circulation in the skin; how they swing is the important thing. When the blood pressure swings up and the systolic has reached an arbitrary level of 80 mm. of mercury, the pulse rate swings down, and the skin is warm and of good color, then patients are ready for surgery. Thus they are ready for surgery long before blood volume or blood pressure are restored to normal. In any consideration of resuscitation it must be remembered that surgery is an inseparable part of resuscitation." 1 reference.

J. C. M. C.


"Management of the cardiac patient includes preoperative, anesthetic, operative and postoperative procedures which interfere minimally with physiological function. All phases of surgical care are affected by the drugs and anesthetics used, but of paramount importance to the anesthesiologist is the actual anesthetic procedure. A technique should be selected that will provide optimal working conditions, yet will not jeopardize the patient's life and will enable him to recover postoperatively. . . . In traumatic cardiac conditions, such as foreign bodies in the heart, lacerations, and cardiac tamponade from hemorrhage, the patient is usually healthy and generally of good physical status. Whatever ear-
diagnostic impairment is present is due to the condition for which surgery is contemplated. These cases are handled anesthetically as are thoracic surgical cases. The chief problem encountered is that of arrhythmia due to increased irritability from manipulation and torsion of the heart itself. . . . Patients with congenital cardiac conditions tolerate anesthesia and operation well if decompensation is not present.

"Anesthetic experience gained in the surgery of congenital pulmonary stenosis has been reported by Harmel and Lamont. A weakening of cardiac action seems to be the commonest serious complication when ether or cyclopropane is used, as indicated by this experience. In this particular operation, as well as in the ligation of patent ductus arteriosus, sharp falls in systolic blood pressure are common and pulmonary edema may occur during anesthesia, or immediately postoperatively. However, the patients tolerate the procedure quite well, and postoperatively most of them show an immediate increase in functional cardiac reserve as well as a total physical improvement. Rheumatic heart disease presents few problems. If valvular stenosis is mild the risk is average but becomes great with tight stenotic valves. If left ventricular failure is present or impending, tolerance to anesthesia and operation is markedly diminished. Evidence of failure must be sought in such symptoms as nocturnal dyspnea, orthopnea, and dyspnea of effort and in signs of cardiac enlargement, and liver or ankle edema. It is to be remembered that a systolic murmur is not evidence of stenosis but should only make one suspicious.

"Hypertension, per se, is not responsible for an increased anesthetic and operative mortality; of importance is the presence of decompensation and the associated condition of the liver and kidneys. . . . Arrhythmias, per se, also are not a contraindication to anesthesia or surgery, but the underlying etiology is the determining factor. . . . In paroxysmal tachycardias a variety of measures may be employed for termination of the condition. Eyeball pressure is occasionally effective; carotid sinus pressure terminates attacks in about one-third of the cases. Mechylol is effective if the irregularity is supraventricular in origin. . . . The anesthetic and operative risk in cases of heart block is that of the underlying cause. . . . Patients with sclerosis of the coronary vessels have a decreased work tolerance. Excitement or effort associated with anesthesia and operation may precipitate thrombosis or ventricular fibrillation. . . . Patients with a history of coronary occlusion or infarction of at least four months withstand good anesthesia and surgery quite well, since by this time the healing process is complete.

"General anesthesia is preferred and intravenous sodium pentothal anesthesia is excellent when combined with nitrous oxide 50 per cent and oxygen 50 per cent. provided relaxation is not needed. When primary inhalation anesthesia is used one should generally avoid cyclopropane. . . . The use of ether even in very small amounts will prevent arrhythmias occurring due to the cyclopropane. A useful technic is that of 'balanced anesthesia' in which general anesthesia is obtained with one of the inhalation agents or intravenous pentothal and intercostal nerve block or field block used for relaxation. Another combined technic found useful for these patients undergoing major surgery requiring abdominal relaxation is the use of general anesthesia by intravenous pentothal with supplementary nitrous oxide and oxygen plus intravenous curare.

"Patients with [syphilitic aortitis] have a poor prognosis even under ordinary circumstances and this is en-
hanced if there is evidence of a dilated aorta. . . . Cardiac decompensation . . . is the . . . most commonly encountered serious cardiac condition in patients undergoing anesthesia and surgery. For elective operations the problem is fairly simple. Digitalization should be carried out by the cardiology service; once the patient is compensated it is desirable to maintain him on a cardiac regimen for about three weeks; the patient should be ambulatory and allowed some activity. . . . Guides to successful management are minimal emotional turmoil, minimal hemorrhage and trauma, and plenty of oxygen. For emergency surgery on a patient in congestive failure, the following routine has been found very favorable: 1. Continuous administration of oxygen by catheter. 2. Phlebotomy of 400 to 750 cc. of blood, depending on the severity of the decompensation, on the red blood cell count, and on the hemoglobin . . . 3. Rapid digitalization. . . . 4. Diuresis. . . . 5. Aspiration of effusions particularly of the chest. . . . A brief note concerning thyrotoxic heart disease with decompensation should be made. Regardless of the manifestations, whether auricular fibrillation, cardiac enlargement, or frank failure, the treatment is that of the hyperthyroidism. Digitalis is not indicated and may actually be harmful. . . .

"Psychotherapy finds a wide field of usefulness in approaching these patients. . . . Sedation should be adequate and the short-acting barbiturates are indicated for sleep and two hours preanesthetically. Depressant drugs that favor hypoxia should be avoided. . . . Digitalis should be used only in failure or impending failure from nontoxic myocardial insufficiency. . . . Reid has clearly shown that an adequate preoperative diet with high vitamin intake is of great importance. . . . It is hardly necessary to remind the good anesthetist that abundant oxygen and ade-
quate oxygen tension be provided during anesthesia. . . . One should fit the anesthetic agent and the technic to the patient and to the needs of surgery, so that optimal working conditions are provided. . . . Cyclopropane has many excellent anesthetic properties and can be used judiciously by the anesthesiologist in the cardiac patient. . . . Two favorable features of ether, however, are often overlooked, namely, that an even blood pressure course can be rather easily obtained and secondly, more oxygen can be administered with ether than with any other of the common inhalation agents. Nitrous oxide and ethylene are relatively impotent agents and anesthesia is often achieved at the expense of oxygen. If this is a likely situation some other agent should be chosen. . . .

"Spinal anesthesia is far from ideal. . . . In cases of decompensation, however, spinal anesthesia has many indications. . . . Local infiltration anesthesia as the sole technic even in good hands is at best often inadequate and can be dangerous. A cardiac patient who feels pain and develops mental strain is a candidate for coronary occlusion or cerebral hemorrhage. . . . A good airway is a prerequisite to any good inhalation or general anesthesia. . . . Compensated respiration is valuable. . . . Positions interfering either with respiration or circulation are to be condemned. . . . Another situation seen at the operating table which the anesthetist must guard against is that of the 'tired assistant' who rests on the patient's chest or accumulates instruments on the chest. This is intolerable. Blood pressure fluctuations and procedures conducive to them must be avoided. . . . Fluid therapy is a controversial issue, but the safest rule is to replace whatever is lost." 38 references.

F. A. M.