place for teaching residents nor an optimal place for treating critically ill patients. Furthermore, they result in costly duplication of expensive equipment.

Given a multidisciplinary unit with an intensivist director, anesthesiology residents (as well as residents from other services) can gain valuable experience from one-month rotation or a one-year elective assignment to such units.

AZMY R. BOUTROS, M.D.
Professor of Anesthesiology
Director of ICU
University of Iowa Hospitals
Iowa City, Iowa 52242

Downloaded from http://asa2.silverchair.com/anesthesiology/article-pdf/41/4/320/621359/0000542-197410000-00003.pdf by guest on 20 April 2024

Drugs and Their Actions

CBF AND MYOCARDIAL O_2 CONSUMPTION Coronary blood flow (CBF) and left ventricular myocardial oxygen consumption ($M\dot{V}_{O_2}$) were investigated before and after intravenous injection of 1) droperidol, 2) droperidol followed by fentanyl, and 3) ketamine. The measurements were performed on 17 patients undergoing heart surgery and compared with values in ten subjects found by previous cardiac catheterization to be free of cardiovascular disease. Heart rate, arterial blood pressure and cardiac index were evaluated in all 27 individuals. Administration of droperidol (0.33 mg/kg) led to a significant increase in heart rate associated with a slight drop of arterial blood pressure secondary to a reduction of peripheral resistance. CBF and $M\dot{V}_{O_2}$ increased by 49 per cent and 38 per cent, respectively. The subsequent injection of fentanyl (0.0067 mg/kg) antagonized nearly all hemodynamic changes induced by droperidol: CBF and $M\dot{V}_{O_2}$ returned to control levels. The combination of droperidol and fentanyl appears to be an ideal anesthetic technique, even for patients with impaired cardiovascular function. Ketamine (5 mg/kg) was followed in four of nine patients by two- to three fold increases in CBF and $M\dot{V}_{O_2}$, probably secondary to increases in arterial blood pressure and heart rate. Insignificant changes were observed in the other five. Because of its unpredictable effect on $M\dot{V}_{O_2}$, ketamine appears contraindicated for patients with fixed hypertension, decreased coronary reserve, or mitral-valve disease. *(Sonntag, H., and others: Coronary Blood Flow and Myocardial Oxygen Consumption in Patients during Induction of Anesthesia with Droperidol/Fentanyl or Ketamine. Z Kreislaufforsch 61: 1092, 1972.)* EDITOR'S COMMENT: We are beginning to witness the growth of a body of evidence to suggest that the "myocardial depression" we have all grown to fear may indeed be of crucial importance for the well-being of the patient with coronary-artery disease and myocardial ischemia. It is interesting to think that the wealth of pharmacologic and physiologic data amassed in the otherwise healthy experimental animal and man may require revision when applied to the patient with compromised myocardial performance. The once-desirable autonomic stimulation provided by anesthetic drugs may turn out to be potentially lethal.