

hematocrit and fibrinogen levels. Platelet concentration has no effect on blood viscosity. Dextran solutions do not lower blood viscosity except by the process of hemodilution. (Putnam, T., Levy, S. V., and Replogle, R. L.: *Factors Influencing the Viscosity of Blood*, *Surg. Gynec. Obstet.* 129: 547 (March) 1967.)

#### ALCOHOL AS A VASODILATOR

Alcohol ingested as ethyl alcohol or whisky produced a marked increase in extremity skin blood flow, though not in muscle, in healthy subjects and no change or a decrease in flow in subjects with signs and symptoms of occlusive vascular disease. Intra-arterial infusion of alcohol in healthy limbs caused decrease in both skin and muscle flow. Oral alcohol, on the other hand caused increases in skin flow even in limbs hot and flushed as a result of recent sympathectomy. It is suggested that alcohol must be partly metabolized to produce vasodilatation. (Gillespie, J. A.: *Vasodilator Properties of Alcohol*, *Brit. Med. J.* 1: 274 (April) 1967.)

**CARDIAC SHOCK** The effects of isoproterenol or metaraminol were compared in fourteen patients with cardiogenic shock following recent myocardial infarction. Pretreatment findings were a low cardiac output (CO) and stroke volume (SV), an increased central venous pressure (CVP), and a normal systemic vascular resistance (SVR). Isoproterenol infusion in most cases resulted in an increased CO sufficient to elevate arterial blood pressure despite a decrease in SVR. This along with a fall in CVP reflected an improvement in ventricular function. In 3 cases, however, CO failed to increase with a resultant fall in arterial pressure. Metaraminol usually caused an increased arterial pressure and a decreased CO. Tachyphylaxis did not occur after prolonged use of isoproterenol and its use in cardiogenic shock is considered encouraging. Three precautions must be observed during isoproterenol administration. These are: (1) ventricular filling must be adequate as reflected by CVP, (2) continuous EKG monitoring to detect ventricular irritability, and (3) continuous arterial blood pressure monitoring. (Smith, H. J., and others:

*Hemodynamic Studies in Cardiogenic Shock*, *Circulation* 35: 1084 (June) 1967.)

**ENDOTOXIN SHOCK** The administration of *Escherichia coli* endotoxin to dogs produces a depression in myocardial contractility and both a reflex and a direct increase in renovascular resistance. When the myocardium is depressed by endotoxin, only vasopressors with strong cardiac inotropic action enable the depressed myocardium to compensate for the increased load imposed by peripheral vasoconstriction. Parallel studies of blood flow in the innervated kidney demonstrate that all vasoconstrictor agents studied (methoxamine hydrochloride, angiotensin amide, and levarterenol bitartrate) produce major increases in renovascular resistance. These increases in renal vasomotion occurred at doses which produced inotropic effects. Only an inotropic vasodilator, isoproterenol hydrochloride, was able both to increase myocardial contractility and to decrease renovascular resistance. (Siegel, J. H., and Fabian, M.: *Therapeutic Advantages of an Inotropic Vasodilator in Endotoxin Shock*, *J.A.M.A.* 200: 703 (May) 1967.)

**BUFFERING IN SHOCK** Sequential correction of acidosis with sodium bicarbonate, increase in extracellular fluid volume with sodium chloride and hemodilution with clinical dextran delayed the time when blood was needed in early shock and decreased the volume of blood required for survival but did not increase survival in animals whose shock was predicted to be irreversible. A small increase in survival of animals exposed to 90 minutes of shock was found when they were given these fluids and blood, as compared with blood alone. (Tragus, E. T., and others: *The Effects of Sequential Buffering, Extracellular Fluid Replacement, and Hemodilution in Hemorrhagic Shock*, *Surgery* 61: 795 (May) 1967.)

**VASOPRESSORS** Cardiac output, blood pressure and blood flow were measured in dogs before and after infusion of sympathomimetic drugs in amounts great enough to produce increments of 25 mm. of mercury increase in blood pressure. The drugs studied