

out appearance of fibrillation. (Petrooulos, P. C.: *Effects on Cardiac Function During Long-Term Perfusion of the Coronary Arteries with Unsaturated Blood or Colloidal Isotonic Solutions*, J. Thor. Cardio. Surg. 45: 460 (Apr.) 1963.)

AORTIC CLAMPING During cross clamping of the aorta a shunt was established, bridging the aortic clamp with a number 10 catheter, with a 13 gauge needle at each end. This permitted 50 to 75 ml. of blood flow per minute into the distal vessels and prevented or greatly reduced acidosis, hypoxia and vascular pooling. Release of the clamp was not followed by hypotension. (Engler, H. S., and others: *Shock Following Release of Aortic Cross-Clamping*, Arch. Surg. 86: 791 (May) 1963.)

HYPOTENSION Severe hypotension frequently accompanies the restoration of distal blood flow after an abdominal aortic aneurysmectomy. This problem was investigated in ten dogs whose aorta was cross clamped. The influence of systemically administered phenylephrine, and phenylephrine injected directly into the distal aorta prior to the release of the clamp, was observed. In the latter group, there was less disturbance of systemic blood pressure than with any of the other techniques. This concept was applied clinically in 15 patients prior to the release of the aortic clamps. The average fall in blood pressure of these patients was 15 mm. of mercury in contrast to 20 unselected patients not given this therapy whose average fall in blood pressure was 110 mm. of mercury. Hypotension is thought to be due to a reactive hyperemia and intravascular sequestration of a significant proportion of the total circulating blood volume into the lower extremities. (Fry, W. J., and others: *Prevention of Hypotension due to Aortic Release*, Surg. Gynec. Obstet. 116: 301 (Mar.) 1963.)

ARTERIAL HYPOTENSION Hemorrhage of 3 per cent body weight in dogs produced an average decrease in systolic blood pressure and skeletal muscle oxygen tension of 40 per cent. Administration of methoxamine

restored blood pressure to control levels, and increased oxygen tension to 27 per cent below prehemorrhage levels. Mephentermine administration could only increase blood pressure to 27 per cent below control values, though it had the same effect on tissue oxygen tension as methoxamine. After hemorrhage, venous muscle lactate was higher than arterial muscle lactate. Administration of methoxamine tended to decrease, while mephentermine administration increased, this difference. (Greene, N. M., and Willenkin, R. L.: *Skeletal Muscle Oxygen Tension and Metabolism During Hemorrhagic Hypotension and Subsequent Vasopressor Administration*, Yale J. Biol. Med. 35: 429 (Apr.) 1963.)

SELECTIVE ISCHEMIA In five normal men studied during breath-holding and immersion of the face in water bradycardia and reduction of blood flow in the periphery (calf of the leg) averaging 80, 68, 35, 30 and 14 per cent, respectively, of control values. This is a protective mechanism (found also in diving animals) to shunt blood to vital organs during apneic diving, in effect producing a "heart-lung-brain" preparation. (Elsner, R. W., Garcy, W. F., and Scholander, P. F.: *Selective Ischemia in Diving Man*, Amer. Heart J. 65: 571 (Apr.) 1963.)

CONTROLLED HYPOTENSION Deliberate hypotension has been induced in 25 patients with nitrous oxide, ganglionic blocking agents, and two new substances, one a potent analgesic and the other a neuroleptic. The narcotic (Phentanyl) is brief in action and 1000 times more potent than meperidine. The neuroleptic is a butyrophenone with potent antiemetic effects and capable of producing cataleptic immobility. The level of hypotension was noted to be easily controlled and tachycardia and tachyphylaxis did not appear. After the operation the blood pressure rapidly returned to preoperative levels and full consciousness was regained in a few minutes. There was no operative pain or restlessness. Nalorphine was required in two patients to reverse respiratory depression. (Larson, A. G.: *New Technique for Inducing Controlled Hypotension*, Lancet I: 128 (Jan. 19) 1963.)