cardiac surgery with the anticipation that prophylactic value may follow and without fear of detrimental results. (*Rodman, R., and Pastor, B. H.: The Hemodynamic Effects of Digitalis in the Normal and Diseased Heart, Amer. Heart J. 65: 564 (Apr.) 1963.*)

HEART NOREPINEPHRINE Utilizing serial blood samples from the coronary sinus and femoral artery and biopsies from an atrial appendage, fluorometric determinations of blood and tissue norepinephrine content were done before, during and after intravenous injections of guanethidine sulfate (15 mg./kg. free base) and reserpine (3 mg./kg. free base) in a small series of pentobarbital anesthetized dogs. Following guanethidine, there was immediate marked release of norepinephrine from the heart indicated by increased concentration in coronary sinus blood and a reduction in the atrial appendage tissue concentration. The increased coronary sinus levels of norepinephrine persisted three hours and were associated with appropriate adrenergic responses; thereafter the continued depletion of tissue norepinephrine was unaccompanied by either elevated coronary sinus levels or adrenergic responses. Following reserpine, there was no immediate rise in coronary sinus blood norepinephrine and the adrenergic response was consistently smaller than with guanethidine. However, there was marked decrease of atrial appendage tissue concentration of norepinephrine after four hours. The initial rapid reduction of norepinephrine in heart tissue following reserpine may be due to early alteration of metabolism of the catecholamines, perhaps a reduced synthesis in heart muscle, while the initial reduction following guanethidine is probably secondary to early rapid release of stores, altered metabolism occurring only later. (*Harrison, D. C., and others: Relationships Between the Release and issue Depletion of Norepinephrine from the Heart by Guanethidine and Reserpine, Circ. Res. 12: 256 (Mar.) 1963.*)

METHYLDOPA Methyldopa, an inhibitor of decarboxylase, may exert its hypotensive action by inhibiting the synthesis of noradrenaline, but this is not certain. Dosage is less critical than with ganglionic blocking agents and the degree of postural hypotension is usually less. Side effects are minimal and judicious combination of this drug with Rauwolfia alkaloids, ganglionic blocking agents and others to suit each patient's needs will be more widely used. (*Smirk, H.: Hypotensive Action of Methyldopa, Brit. Med. J. 1: 147 (Jan. 19) 1962.*)

TRASYLOL Burns fatal to mice in the control series were treated with very high doses of Trasylol with 95 to 100 per cent survival. Trasylol is a non-allergenic polypetide which inhibits trypsin, kallikrein, chymotrypsin and plasmin between *p*H 5 and 7.8. Normal trypsin inhibitor is ineffective between *p*H 6.5 and 6.8. (*Koslowski, L., Darckowa, D., and Waschkeit, G.: Trasylol, Chirurg. 33: 533, (Dec.) 1962.*)

VASOPRESSIN Circulatory effects of vasopressin are increased arterial pressure, bradycardia, and reduced splanchnic perfusion after larger dose; coronary, renal and lower extremity blood flows are reduced. The synthetic product has an effect 5 times greater on blood pressure and 10 times less on antidiuresis than naturally found lysin-vasopressin. The action is directly on vascular musculature. Side effects are pallor of skin, nausea, vomiting, defecation and micturition. Indications for use are bleeding of esophageal varices and hypovolemic shock. (*Tsakiris, A., and Buhlmann, A.: Effects on Circulation of a New Vasopressin, Deutsch. Med. Wschr. 88: 46 (Jan.) 1963.*)

ANGIOTENSIN Digital vascular responses to intravenous and intra-arterial infusions of angiotensin II and norepinephrine were studied in man. Angiotensin II constricts the precapillary (resistance) vesesls of the digit without associated constriction of the post-capillary (capacitance) vessels. Norepinephrine produces constriction of both pre and post-capillary blood vessels. (*DePasquale, N. P., and Burch, G. E.: Angiotensin II, Digital Blood Flow, and the Pre-capillary and Post-capillary Blood Vessels of Man, Ann. Intern. Med. 58: 278 (Feb.) 1963.*)

ERGOMETRINE Forceps delivery or cesarean section was accomplished with light

general anesthesia and muscle relaxant. All patients had 0.5 mg. of ergometrine maleate intravenously. A marked rise in both systolic and diastolic pressures occurred within three minutes in patients suffering from hypertensive toxemia while no response was seen in normotensive patients and little change in those with chronic hypertension. Anesthetics causing blood pressure falls minimize the effects of ergometrine, while those causing blood pressure elevation and sympathomimetic amine release exaggerate its effects. (*Baille, T. W.: Vasopressor Activity of Ergometrine Maleate in Anesthetized Parturient Women, Brit. Med. J. 1: 585 (Mar. 2) 1963.*)

CURARE ANTAGONIST Panthenol is the alcohol of pantothenic acid, which is an essential part of the co-enzyme of acetylization (co-enzyme A). Numerous substances are acetylated, amongst them choline to acetylcholine. This might explain curare antagonism of pantothenic acid. Panthenol was used as a curare antagonist in 120 patients. It was highly effective; and since it did not cause bronchospasm or bronchial secretions, no atropine had to be given. Recurarization was not observed. No untoward circulatory effects occurred. It is believed superior to all other presently available curare antagonists. (*Weber, T. M.: Position of Panthenol Amongst the Curare Antagonists, Der Anaesthesist 12: 1 (Jan.) 1963.*)

RESPIRATORY DEPRESSION Arterial oxygen and carbon dioxide tensions were measured to compare respiratory depression following administration of racemorphan with that following a mixture of meperidine and levallorphan. In doses producing equal analgesic effects, meperidine, despite the addition of levallorphan, caused a significantly higher elevation of carbon dioxide tension than racemorphan without addition of an antagonist. (*Schmidt, K.: Blood Gas Analysis Concerning the Respiratory Depression of Two Commonly Used Analgesics in View of Intracranial Hypertension, Der Anaesthesist 12: 6 (Jan.) 1963.*)

DIGITALIS The only differences in action of cardiac glycosides are in onset of action, maximal effective dose, rate of absorption and daily loss of activity. Cumulation may better be expressed as "remaining active dose per day." (*Gillman, H., and Grosse-Brock-Hoff, F.: Therapy With Cardiac Glycosides, Deutsch. Med. Wschr. 1: 1 (Jan.) 1963.*)

SODIUM SALICYLATE Sodium salicylate decreases the time necessary to effect respiratory arrest from ether and chloroform anesthesia in rats. In addition it decreases the time to respiratory arrest due to hypoxia from hypoxic mixtures of nitrous oxide and oxygen. A dosage response relationship seemed to exist for ether anesthesia but not pentobarbital. The effect of salicylate on inhalation anesthetics was interpreted as being primarily caused by the increased respiration seen in these animals after sodium salicylate. (*Bowman, D. C., Damgaard, E. D., and Doemling, D. B.: Sodium Salicylate Effect on General Anesthesia in Rats, J. Pharmacol. Exp. Ther. 138: 236 (Nov.) 1962.*)

PHENOTHIAZINE POISONING Stimulating drugs are contraindicated in the treatment of phenothiazine poisoning. While chlorpromazine may protect against convulsant poisons, it can occasionally potentiate convulsant effects of drugs. A 60 mg. dose of megimide caused severe convulsions in a patient with mild chlorpromazine poisoning. (*Lendle, L.: Phenothiazine Poisoning, Muenchener Med. Wschr. 105: 152 (Jan.) 1963.*)

ASSESSMENT OF DRUG SAFETY Before drugs are released to the public, their testing should include: (1) information on the rate and degree of absorption, the excretion of the drug and the duration of its action; (2) results of tests for screening for toxicity included and uterine-fetal tests on at least two or more species; (3) means of assessing the degree and rate of recovery after symptoms have appeared and something on antidotal tests; (4) the nature of severe reactions that might be anticipated. (*Noel, P. R.: Toxicity Tests in the Assessment of Drug Safety, Lancet 2: 824 (Oct. 20) 1962.*)