and McKay, D. G.: Intravascular Thrombi and Intestinal Factor of Irreversible Shock, Ann. Surgery, 150: 261 (Aug.) 1959).

ADRENAL RESPONSE Administration of bacterial endotoxin to an animal results in characteristic responses including hypotension, hyperglycemia, changes in the white cells and, at high dosage levels, death. The effects of the endotoxin on the adrenal cortex and medulla were studied in mongrel dogs. Small doses of *E. coli* endotoxin result in maximal adrenal cortical stimulation and fever, but infrequently lead to increased adrenal medullary secretion. Large doses of *E. coli* endotoxin result in adrenal medullary stimulation, in addition to the adrenal cortical stimulating and fever promoting activities. Transection of the spinal cord at C-7 abolishes the adrenal medullary response to large doses of endotoxin, leaving unimpaired the febrile, hypotensive and adrenal cortical responses. This suggests that adrenal medullary activation following endotoxin is dependent on descending nerve pathways in the spinal cord. Epinephrine release is not necessary for the febrile and adrenocortical stimulating effects of endotoxin. This indicates that there is a differential response of the adrenal axis more sensitive than the central nervous system center which controls epinephrine release. *(Egdahl, R. H.: Differential Response of the Adrenal Cortex and Medulla to Bacterial Endotoxin, J. Clin. Invest. 38: 1120 (July) 1959.)*

GERIATRIC ANESTHESIA A group of 90 geriatric patients having hip surgery, 46 with spinal anesthesia and 44 with general anesthesia, was studied. General anesthesia utilizing a technique of analgesia plus relaxants was found preferable to the hypobaric spinal anesthesia for the following reasons: (1) pain in the unanesthetized leg with unilateral spinal, (2) necessity for placing some of the patients in a prone position, (3) more hypotension during surgery and postoperatively with spinal, (4) longer time necessary to produce spinal anesthesia. The postoperative mortality of 8 per cent in those receiving spinal anesthesia and 18 per cent in those receiving general anesthesia was not considered significant. *(Danielson, H. E., and Converse, J. G.: Anesthesia for Aged: Comparative Evaluation, South. M. J. 52: 1132 (Sept.) 1959.)*

ANESTHETIC ANTIDIURESIS Renal excretion of water and solute were studied during intravenous infusion of glucose and water in 21 patients about to undergo elective surgical operations. Sufficient fluid was given during the infusion to provoke and subsequently maintain during the anesthesia induction a one liter positive water balance. Anxiety and atropine premedication does not inhibit a normal diuretic response to water loading. Induction of anesthesia with ether, cyclopropane and nitrous oxide caused marked antidiuresis. Thiopental induction caused no antidiuresis and prevented or lessened the antidiuretic response when inhalation agents were subsequently administered. Vasopressive responses were intact during thiopental anesthesia and no dehydrating polyuria was associated with its use. The antidiuresis following inhalation anesthesia had characteristics of antidiuretic hormone responses but, in addition, involved parallel reductions in urinary total solute and water excretion, suggesting alterations in kidney function involving other mechanisms. *(Aprabonian, H. A., and others: Influence of General Anesthetics on Water and Solute Excretion in Man, Ann. Surgery 150: 122 (July) 1959.)*

POSTANESTHETIC EMESIS From a study of 1,602 patients recovering from general anesthesia the following conclusions emerged: (1) The over-all incidence of vomiting was 24.3 per cent, with a higher incidence among females. (2) The influence of body structure was not marked for either sex, but emesis was less frequent in the older age groups. (3) Anesthesia with use of combined thiopental and nitrous oxide was followed by vomiting in 11 per cent of the cases. Ether and cyclopropane anesthesia were followed by vomiting in 23.3 and 24.1 per cent of the cases respectively. However, nausea and vomiting after anesthesia with ether were as a rule more persistent than after that with cyclopropane. (4) The incidence of vomiting varied significantly with the site of operation for both sexes. Head

and neck operations and particularly those on the thyroid were followed by a high incidence of emetic symptoms. (5) The duration of anesthesia was not important in relation to postoperative nausea and vomiting, but there appeared to be an upward trend as duration increased. (6) A gastric tube provided a beneficial effect, while endotracheal intubation and the use of relaxants had no appreciable influence on postoperative vomiting. (*Smessaert, A., and others: Nausea and Vomiting in Immediate Postanesthetic Period, J. A. M. A. 170: 2072 (Aug. 22) 1959.*)

REFLEX ACTIVITY Three groups of reflexes were studied during general anesthesia with ether, nitrous oxide and barbiturates: skin reflexes, tendon reflexes and brain stem reflexes. The pupillary reflex was found to be the most dependable reflex: it could always be elicited in the same stage of anesthesia, both during induction and emergence. An important advantage in using the pupillary reflex is that it is not essentially interfered with by muscle relaxants. It is inconceivable that the patient is conscious while the conjunctival or eye lash reflex is absent. That means that the patient may be able to move and to groan but that he will have amnesia as long as conjunctival or eyelash reflex are absent. The only exception is a patient who is so completely curarized that the seventh cranial nerve which carries the efferent neuron can not function. (*Kulcsar, A.: Reflex Investigations in Anesthetized Patients, Der Anaesthesist 8: 240 (Aug.) 1959.*)

IGNITION OF LIPSTICK Certain hydrocarbons can be ignited spontaneously when exposed to a flow of 100 per cent oxygen. The question arose as to whether spontaneous combustion would occur when lipstick and chapstick were so exposed to oxygen, as under an oxygen mask. Fourteen samples of lipstick and chapstick were tested, exposing them for ten minutes to atmospheres of 100 per cent oxygen at normal and lowered barometric pressures. Spontaneous combustion did not occur in any test, nor were any other notable changes in these substances observed. (*Kidera, G. J., and Marbarger, J. P.: Effect of Oxygen on Freshly Applied Lipstick and Chapstick, Aerospace Med. 30: 431 (June) 1959.*)

MECHANICAL FAILURE Due to faulty setting of valves, or to accidental dislodging of valves on a modern anesthesia machine, a patient was nearly killed when exposed to high pressure which led to rupture of lung tissue, trachea, or a bronchus with consequent pneumothorax and extensive subcutaneous, mediastinal, muscular, and retroperitoneal emphysema. Such an incident, fortunately, is a rare complication but must emphasize the fact that such accidents can occur, even with a new machine from a reputable manufacturer. Whenever, in emergencies, the performance of a machine or the composition of gases or anesthetic agents delivered by mechanical devices is in question, it is good practice to disconnect the anesthesia machine and to rely on simple methods of resuscitation such as mouth-to-endotracheal tube or mouth-to-mouth ventilation. Moreover, it is prudent not to inflate cuffs on endotracheal tubes unless dictated by necessity. The deflated cuff is not only kinder to the tracheal mucosa, but also, it allows gas to escape around the tube. The fact that the cuff on the endotracheal tube in the case reported was not inflated may have been lifesaving to this patient. (*Gravenstein, J. S.: Pneumothorax and Extensive Emphysema After High Intratracheal Pressure in Anesthetization, J. A. M. A. 171: 158 (Sept. 12) 1959.*)