ABSTRACTS

Editorial Comment: A fixed style of presentation for this department of ANESTHESIOLOGY has purposely not been defined. It is the wish of the Editorial Board to provide our readers with the type of abstract they desire. Correspondence is invited offering suggestions in regard to the length of abstracts, character of them, and source of them. The Board will appreciate the cooperation of the membership of the Society in submitting abstracts of outstanding articles to be considered for publication.

ARNOLD, W. O.: *Shock.* J. Florida M. A. 29: 219–223 (Nov.) 1942.

"Failure of the circulation may result either from a weakness of the heart itself or from an insufficiency of the circulating blood volume. . . . Most observers classify peripheral circulatory failure into two types, depending upon the rapidity of its development and the length of time it lasts. . . . The picture of shock must not be confused with the picture of circulatory failure of cardiac origin, since the treatment is in many instances diametrically opposed. . . . Until a few years ago shock was recognized only by the surgeons as an effect of accidental or surgical trauma, but today it is known that it may be produced in a great many other ways. . . . All the . . . causes of the syndrome of shock have one common factor, a discrepancy between the blood volume and the capacity of the vascular system. . . . The most important cause of the discrepancy is the increased vascular capacity which follows capillary endothelial damage. Moon claimed this to be the explanation of shock. . . . Shock can be recognized before the fall of the blood pressure by laboratory aid. . . .

"While there are many factors concerning shock about which all are not in accord, it is agreed that the factors which call for treatment are the anoxia and the decrease in the blood volume. Treatment should be directed at the removal or amelioration of the cause, and the restoration of the blood volume to normal. The chief need is the restoration of the fluid lost. . . . It should be emphasized that plasma loss may be present in any type of shock and, therefore, that plasma replacement is indicated whenever it becomes necessary as shown by an increase in the hematocrit determination out of proportion to the rise in the plasma protein level. In plasma loss physiologic saline solution so commonly used is not effective. In fact, it may be harmful. . . . The use of plasma increases the osmotic pressure inside the capillaries and restores the fluid balance better than any other substance. . . . As anoxia is the eventual result of peripheral circulatory failure, it is evident that the use of oxygen is indicated both in the prevention and treatment of shock. . . . Other treatment includes morphine for pain and restlessness, warmth and rest, and the use of adrenocortical extract is helpful in cases of excessive plasma loss, especially that incident to burns. Caffeine and coramine, being respiratory stimulants, may have an indirect effect that is beneficial but they are not considered as having much effect on the circulation itself." 14 references.

J. C. M. C.

ADRIANI, JOHN: *Symposium on Anesthesia: the Pharmacologic Basis of the Selection of Anesthesia.* New Orleans M. & S. J. 95: 266–273 (Dec.) 1942.

"The formulation of a definite routine in the selection of anesthesia is

complicated by a number of variable factors. Consequently, each case presents an individual problem. . . . In choice of anesthesia the foremost consideration is pharmacologic effects. . . . Most patients who are to be anesthetized have some physio-pathologic change as a result of their disease. This, too, complicates the problem. In addition, other underlying pathology may further complicate the picture. The effects of surgical manipulations, traumatic reflexes, posture, hemorrhage, and fluid loss, may contribute additional and often unpredictable physiologic changes. The skill, dexterity, and temperament of the operator are always considered by the anesthetist when selection of the agent and technic are at his discretion. . . . Assuming the anesthetist and surgeon are both competent and the effects of the surgical procedure are minimal, one may select the drug on the basis of pharmacologic effects and their relationship to the presenting pathology. . . . Inhalation general anesthesia, still the most reliable and controllable, is induced and maintained with gases or vapors of low-boiling liquids. . . . The ultra-short-acting barbiturates are the best available drugs for administration by vein. . . . This method of drug administration is not controllable. . . . Rectal anesthesia is popular in certain sections of the country. Drugs satisfactory for rectal anesthesia are few in number. . . . Regional anesthesia may be used in psychically suited subjects in which inhalation and other types are not desired or contraindicated. . . . Satisfactory anesthesia cannot be administered without premedication. The needs for premedication are fourfold: (1) to induce psychic sedation and minimize excitement; (2) to decrease metabolism so that less oxygen is required—a necessity for nitrous oxide and ethylene; (3) to diminish mucous and other secretions; and (4) to provide prophylactic effects against some anticipated undesired action of a drug other than the anesthetic action." 17 references.

J. C. M. C.

BARNES, A. R.: *The Problem of Pulmonary Embolism.* West. J. Surg. **50**: 551–556 (Nov.) 1942.

"In a previous paper on this subject, I made the following remarks: 'An operation in which the patient had weathered all other hazards, a fracture that is healing satisfactorily, a puerperium in which all appears to go well, a thrombophlebitis in which the patient is well on the way to recovery or a minor sprain or bruise may be the setting for death from pulmonary embolism. The great tragedy of such a death is that in almost every such case the accident of pulmonary embolism was the sole barrier that stood between the patient and recovery. Its sudden and unpredictable occurrence comes as a terrible shock to the relatives of the patient and his physician and robs the physician of a well earned and successful result. And for every fatal attack there occur two or three instances of nonfatal seizures attended by grave apprehension for the patient's life; meanwhile the physician looks on, distressingly limited in his power to prevent a subsequent, and possibly fatal, recurrence.' . . . The magnitude of this problem is best appreciated if one considers the statistics of the pathologist. . . . If . . . [the] percentage of deaths from pulmonary embolism is applicable to the general population, and unless this expectancy can be modified by effective treatment, it may be assumed that more than 3,000,000 people now living in this country eventually will die of pulmonary embolism. . . . While the cause of pulmonary embolism is unknown, many factors are known to contribute to its occurrence. It occurs conspicuously following operation. . . . Snell showed that obesity definitely predisposes an individual to