Anesthesiology
50:79, 1979

Reports of Scientific Meetings

Ellis N. Cohen, M.D., Editor

First Annual Conference on Shock

The First Annual Conference on Shock, held at the Airlie Conference Center in Virginia, June 1–3, 1978, was noteworthy on two counts. First, it was the inaugural meeting for a new organization, to be called "The Shock Society," with *Circulatory Shock* as its scientific journal and Dr. W. Schumer, Chicago Medical School, as its first president. Second, the meeting was enthusiastically attended by about 200 basic and clinical scientists, resulting in a continuous exchange of ideas on many levels.

This being the "first" such conference, it was appropriate that the several keynote speakers reviewed relevant aspects of "shock." Dr. R. C. Lillehei, Minnesota, with considerable humor, examined some historical ideas about shock relevant to his particular interest in the hepatosplanchnic organs, concluding with the prediction that the hepatic reticuloendothelial system will be of critical importance for determining mortality in shock states.

Dr. Emilie Black, National Institute of General Medical Sciences, reviewed that institute's support of trauma research. It appears likely that the recent changes in research funding have acted as a deterrent to physicians. Applications from physician researchers have decreased, in some areas dramatically, but at the same time, investigators have evinced little enthusiasm, in the form of research proposals for new programs introduced as older ones were phased out. (This is particularly true for anesthesiologists.)

Research on "Responses to Injury" was reviewed by Dr. H. B. Stoner, University of Manchester, U. K. Much of this material concerned work from the older literature, with little emphasis on current areas of interest in neuropharmacology, endocrinology, nutrition, immunology, etc. Thus, his conclusion that exciting new directions have yet to be identified was not shared by many listeners.

A fourth invited speaker, Dr. I. A. Silver, University of Bristol, U.K., admirably illustrated one such new direction. Reviewing his own work using microelectrodes of such extraordinary delicacy that a single intracellular probe could measure continuously four different modalities, he presented evidence that the damaging effects of ischemia depend on a P_{O_2}- and *p*H-dependent potassium leak from cells. Irreversible damage appears to correlate with a critical interstitial K^+ concentration.

The closing speaker, Dr. E. E. Selkurt, Indiana University, further exemplified some new directions in an exciting series of studies of the apparent paradox of post-resuscitation diuresis in the presence of increased circulating antidiuretic hormone. The modulation of ADH appeared to be via renal prostaglandin, but the intriguing twist was the finding that the change in the post-hemorrhagic state results from a reversal of the pulmonary role in PGE metabolism, with the effluent blood containing increased PGE concentration.

Three mini-symposia were held on limited topics with invited speakers. At one such conference Drs. A. Lefer, Jefferson Medical College, R. McConn, Albert Einstein College of Medicine, and L. B. Hinshaw, University of Oklahoma, inconclusively debated whether circulating myocardial depressant factors are present in shock. Dr. T. H. Siegel, State University of New York, presented a sophisticated multivariate analysis of predictions in specific shock states that lead to readily recognizable response patterns.

In a second conference, on multiple organ failure, Dr. J. F. Burke, Harvard Medical School, discussed the management of sepsis in burns; Dr. S. R. Powers, Albany Medical College, the possibility that endothelial cell swelling disturbs oxygen transport, and Dr. B. E. Marshall, University of Pennsylvania, reviewed the causes of pulmonary edema following thromboembolism. However, the outstanding presentation at this session was provided by Dr. T. M. Saba, Albany Medical College, in a review of exciting and novel work concerning the reticuloendothelial system in shock. The demonstration that the removal of circulating debris by the reticuloendothelial system is dependent on a circulating α-2-glycoprotein (opsonin), and that this opsonin is depleted in many shock states, has important implications for many shock hypotheses. However, Dr. Saba's announcement that opsonin had been utilized for therapeutic trials in man with encouraging results will certainly stimulate much new interest in these concepts.

Metabolic disturbances in shock were the subject of the third mini-symposium. Dr. L. Mela, University of Pennsylvania, reviewed some effects of ischemia and endotoxins on mitochondria; Dr. J. J. Spitzer, Louisiana State University, considered lipid metabolism in endotoxic shock; and Dr. R. R. Wolfe, Harvard Medical School, discussed carbohydrate metabolism following burns. All of these speakers summarized their areas of interest, but clearly there is much work to be done before a coherent and integrated picture of overall metabolic changes will emerge.

The response to the request for abstracts exceeded expectations, with the result that 83 papers were presented in oral or poster sessions throughout the meeting. These were consistently well attended and often hotly debated, and characterized by a wide variety of both topics and scientific quality. It is perhaps noteworthy that at least 12 studies reported work in man, and this combination of basis and clinical research was a hallmark of the meeting. Abstracts of scientific papers were published in *Circulatory Shock*, Volume 5, No. 2, 1978, and it is planned to publish the contributions to the symposium separately.

The First Annual Conference on Shock was successful, and future conferences seem certain to contain material of particular interest to anesthesiologists.

BRYAN E. MARSHALL, M.D.
Department of Anesthesia
University of Pennsylvania
Philadelphia, Pennsylvania 19104