or sensitivity reactions to the additives can be confidently predicted in the recipients. Routine exposure of patients needing blood transfusion to such harmful effects is unjustified on three major grounds: first, the low incidence of transfusion reactions encountered when enlightened blood banking practices are employed; second, the lack of evidence that any existing pharmacologic agent is effective in fundamentally altering the relatively infrequent transfusion reactions that do occur; and third, the hazard that such agents as the corticosteroids may mask the *symptoms* of a hemolytic reaction so that the transfusionist may administer a fatal amount of incompatible blood in the absence of warning symptoms and signs.

The safest approach to the prevention of transfusion reactions continues to be reliance upon meticulous adherence to established blood banking techniques. The need for improvement is acknowledged and intelligent striving for progress must continue. However, present-day knowledge in the field of blood transfusion is sophisticated enough to view with grave suspicion any panaceas that may be proposed to eliminate all transfusion problems. Such proposals deserve critical evaluation to discern whatever merit they may contain, but vigorous rejection whenever they represent a backward step that increases the hazard to the sick patient. In the light of current knowledge, the routine administration of corticosteroids with blood transfusion should certainly be condemned.

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Tissue Oxygen Tension: One Step Closer

IT is well established that anesthesia produces a deviation in the normal activity of tissues. This is a fundamental axiom in anesthesia. A thorough knowledge of such deviations would not only lead to a fuller appreciation of the theories of narcosis, but also to the acceptance and use of adequate safeguards to facilitate a prompt and complete return to the normal physiologic state of tissues upon cessation of anesthetic action. One of the many significant biologic criteria of a tissue is its oxygen tension. Current research has facilitated the answer to this problem for both the physiologist and the anesthesiologist. It has also brought us *One Step Closer* to our ultimate goal—the determination of oxygen tension of a cell, *in vivo*.

Biologic literature is replete with studies on the partial pressure of oxygen in blood and gases. Chemical, electromagnetic, and electronic (polarographic) methods have been employed [1] and more recently, chromatography.[2] However, the use of micro-electrodes provided the first reliable and satisfactory method for measuring local oxygen tension in animal tissues.[3] Clinical applications of such studies have only appeared in the literature within the last two decades. An invaluable and comprehensive symposium on tissue oxygen tension, planned by The American Physiological Society, has recently been published.[4]

In 1950, Hugh Montgomery initiated a series of studies in man, on the oxygen tension of tissues (skin, skeletal muscles) employing the polarographic method.[5] Modification of electrodes for continuous recording of blood P_{O_2} and P_{CO_2} by polarography have been published.[6, 7] Other studies on the oxygen tension of the myocardium,[8] and brain, and other tissues [9] have also been reported. Recently, Sugioka emphasized hyperventilation as a possible cause of cerebral hypoxia employing polarographic electrodes.[10]

Much of the recent progress in tissue oxygen tension studies has been due to (1) the introduction of refined techniques capable of providing not only accurate, but also continuous recordings of tissue oxygen tension, and (2) to the increased enthusiasm in defining cellular metabolism in uanesthetized, normal and abnormal tissues, as well as those tissues under the influence of anesthetic agents.

While polarography constitutes the most desirable and practical method of determining tissue oxygen tension at the present time, it is far from optimum. Considerable improvement must be made to eliminate "aging" and instability of the electrode, interference by mo-

tion, the large size of the electrode and inaccuracies due to the effect of temperature and of hemoglobin on the electrode. A membrane more permeable to the oxygen molecule would also contribute to the greater utility of the method. Perhaps, the determination of tissue oxygen tension can best be accomplished by depending upon some intrinsic characteristic of the oxygen molecule such as a (1) reduction by electrons; (2) its paramagnetic property; or (3) its "energy level." It is predicted that considerable strides will be made in the very near future in perfecting a better method for determining tissue oxygen tension and eventually *One Step Closer* in determining continuously and, *in vivo*, the oxygen tension of a cell.

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DEDICATION

DEDICATION of the Headquarters Building of the American Society of Anesthesiologists was held in Park Ridge, Illinois, at 3:30 P.M. on May 21, 1960. The officers of the Society, the member of the Board of Directors, and approximately 160 guests were present. Dr. Leo V. Hand, President, presided at the services, and the dedicatory address was delivered by Leonard W. Larson, M.D., Bismark, North Dakota, Chairman of the Board of Trustees of the American Medical Association.* Dr. Larson's address follows:

"Although dedicatory addresses have become somewhat standardized over the years, I hope you will accept my sincere congratulations and best wishes, on behalf of the American Medical Association and its 178,000 physician-members.

"I am always delighted when any branch of medicine or the allied health sciences demonstrates its progress and achievement in a tangible way such as you have done here. But I am particularly pleased that the American Society of Anesthesiologists has grown to maturity in such a relatively short span of years.

"Your stature as a vital member of the great body of medical science has been increasingly evident in the last 30 years. It might be said that anesthesiology is one of the newest sciences, even though its practical application goes back to ancient times.

"But only in recent times has the overflowing development of your science made such a monumental contribution to medical progress. Today, thanks to anesthesiology, the surgeon can perform innumerable operations that were impossible a few years ago.

"The anesthesiologist has evolved from a technician to a highly skilled partner of the surgeon and obstetrician. The modern health team cannot function properly without the anesthesiologist.

"What I have said represents the respect and

* Dr. Larson is now President-Elect, American Medical Association.