

712

Foreword

No other development in the history of medicine has had the conceptual and philosophic implications of organ transplantation. In all past times, the objective of physicians and surgeons faced with diseases of specific organ systems was to extract the last grudging moment of function from a failing heart, lung, liver, or kidney using medicines or with operative procedures that often were poorly conceived but brilliantly executed. When the function of a vital organ system reached a certain level, the whole body died even though all the other organ systems were without defect.

It is breathtaking to contemplate the departure from this rear-guard approach which has been made possible with transplantation. With one bold stroke, health and life can be restored, and with considerable reliability and safety. The ability to provide these services has descended like magic into the consciousness of a new generation of social observers, physicians, and patients.

The history has been so short that most of the workers present at the beginning of this new field are still alive, and many are still active professionally. Yet, less than 25 years ago, Nobel Laureate Frank MacFarlane Burnet reviewed the field of transplantation in the *New England Journal of Medicine* and wrote that "... much thought has been given to ways by which tissues or organs not genetically and antigenically identical with the patient might be made to survive and function in the alien environment. On the whole, the present outlook is highly unfavorable to success"

Only a few months after the publication of this pessimistic view, the avalanche of successful renal transplantations began which definitively opened the modern era of transplantation, made possible by combination drug therapy with azathioprine and steroids. Many improvements have been introduced since that time, but the most practical and therefore the most important have been made possible by the new drug cyclosporine.

The boldness and effectiveness with which these improvements in immunosuppression, and collateral improvements in tissue procurement and preservation, have been applied would have been thought to be pure fantasy if they had been predicted only a few years ago. Even multiple organ transplantation has been feasible. It has become commonplace to transplant the lung plus heart, a kidney plus pancreas, a liver plus heart, a liver and pancreas, or various other combinations of organs.

Application of these wonderful new therapeutic tools has provided the ultimate challenge to a new breed of anesthesiologists whose skill has become legendary in monitoring moment-to-moment physiologic changes and in making adjustments in pharmacologic therapy. No surgeon who works in the difficult field of organ transplantation can fail to view his colleagues in anesthesiology with anything but awe.

In this book, these warriors at the head of the table have revealed

their secrets against a background provided in the other chapters by bright young immunologists, internists, and surgeons. The result is a lively and informative book that should find its way to anesthesia preparation rooms throughout the world, thereby providing a great service both to anesthesiology and to surgery.

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