

ORGAN PROCUREMENT AND TRANSPLANTATION IN LOUISIANA: *AN UPDATE AFTER 16 YEARS*

JOHN C. McDONALD, MD; EDWARD E. ETHEREDGE, MD;
GARY D. FRENTZ, MD; DANIEL J. FREY, MD; CHARLES F. GENRE, MD;
FRANCISCO M. GONZALEZ, MD; DANIEL H. HAYES, MD;
MICHAEL D. LANDRENEAU, MD

SOME 16 YEARS ago there was published a similar article in this journal.¹ This current presentation will briefly survey progress and summarize the current status of activity in this field 16 years later.

In 1975, progress in the field of organ procurement and transplantation had been spectacular, and Louisiana's role in that progress had been substantial. However, it would have required true prescience to foresee the events which have followed.

Few, if any, innovations in medicine have made such an impact on the medical profession and on culture as organ transplantation. Although a relatively small number of such procedures are done annually, perhaps 25,000 to 35,000, the fact that organs and tissues from the dead can be used to restore health to many is a concept that has shocked contemporary culture. Organ and tissue transplantation are still far from ideal, but they have affected the treatment of organ failure from many diseases, the definition of death, and the mores of society. Transplantation has compelled interinstitution collaboration. It has led to federal legislation. It has led to innovations and new initiatives in the financing of health care. It has led to several new fields of special expertise. Transplant surgery, medicine, pathology, and immunobiology are rapidly growing areas of endeavor. The transplant coordinator is an entirely new professional.

In 1975, the only organs being transplanted therapeutically were corneas and kidneys. Today, heart transplants are more reliable than kidney transplants. Liver replacement is the indicated therapy for many diseases. Pancreatic transplantation is on the horizon. Bone transplantation rehabilitates thousands and skin

transplants commonly maintain life long enough for burn patients to recover.

The discovery of cyclosporine made extra-renal transplantation a reality. This remarkable immunosuppressive agent allowed the suppression of immune responses to new antigens (transplants) without eliminating the memory of previously experienced antigens (bacteria) or suppression of nonspecific host defense mechanisms such as phagocytosis. Thus, patients infested, if not infected, with microbial agents had the opportunity to recover from their organ failure before dying of sepsis.

This discovery was shortly followed by a commercial monoclonal antibody which reacted with all thymic-derived lymphocytes and was unusually effective for treating rejection episodes. Again, treatment of rejection was more precise and did not destroy all leukocytes. Survival of renal grafts increased 10% to 15%, but survival of liver and heart grafts doubled and almost tripled.

Suddenly, by 1985, rather than a few thousand patients who might benefit from transplantation of whole organs, there were potentially hundreds of thousands. A crisis arose because the profession had been engaged in trying to make these therapies successful and not in how to deliver the therapy once it was successful. Thus, we were caught with a service to deliver and no effective means of delivering it.

The deficits between supply and demand created an epidemic of tragic human situations which attracted the attention of political leaders and the media. Investigations into the nature of organ procurement agencies and their policies uncovered many