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*Letter sent out in 1966*

DEAR DOCTOR

WE ARE PREPARED TO STUDY THE PROBLEMS OF ORTHOTOPIC CARDIAC HOMOTRANSPLANTATION IN HUMAN BABIES, AND I HOPE THAT YOU WILL WANT TO HELP US LOCATE THE CASE MATERIAL WHICH WE WILL REQUIRE. OUR SURGEONS HAVE PERFECTED THE TECHNIQUE IN PUPPIES DURING THE LAST SEVERAL YEARS. THE METHOD EMPLOYS REMOVAL OF THE HEART OF A DONOR AFTER THE CLINICAL DEATH OF THE DONOR (ABSENCE OF HEART BEAT BY AUSCULTATION AND ABSENCE OF REGULAR COORDINATED RESPIRATORY ACTIVITY). THE HEART IS REVIVED BY CORONARY PERFUSION WITH OXYGENATED HEPARINIZED WHOLE BLOOD FOR PERIODS UP TO SEVERAL HOURS, MONITORING THE VISIBLE PUMPING ACTION OF THE HEART AND FOLLOWING THE ELECTROCARDIOGRAM CONTINUOUSLY. THE ELECTROCARDIOGRAM IS PARTICULARLY USEFUL IN PREDICTING THE VIABILITY OF THE PROPOSED HOMOGRAFT. THE RECIPIENT IS NOT OPERATED ON UNTIL AND UNLESS THE VIABILITY OF THE HOMOGRAFT OR PERFUSION IS ESTABLISHED.

WE HAVE BEEN TESTING HISTOCOMPATIBILITY RECENTLY, USING A SEROLOGIC METHOD AND A METHOD INVOLVING THE INJECTION OF MIXED LYMPHOCYTES INTO IRRADIATED HAMSTERS. THE RESULTS IN PUPPIES ARE IN AGREEMENT AND APPEAR TO PREDICT THE CHARACTER OF HOMOGRAFT REJECTION TO BE EXPECTED. WE HAVE ALSO FAMILIARIZED OURSELVES WITH THE HOMOGRAFT REJECTION PHENOMENON IN PUPPIES, THE SENSITIVITY OF THE ELECTROCARDIOGRAM IN FOLLOWING REJECTION AND ITS CONTROL WITH IMMUNOSUPPRESSIVE AGENTS. CURRENT EVIDENCE SUGGESTS THAT HISTOCOMPATIBILITY TESTING MAY BE A BETTER PREDICTOR OF REJECTION IN CARDIAC TRANSPLANTATION THAN IT IS IN RENAL TRANSPLANTATION. WE ALSO FEEL AT THIS TIME THAT CARDIAC TRANSPLANTS ARE LESS SUBJECT TO REJECTION THAN KIDNEY TRANSPLANTS.

AS DONORS, WE PROPOSE TO USE ANENCEPHALIC NEWBORN INFANTS WHICH WE WILL RECRUIT FROM OBSTETRICAL SERVICES THROUGHOUT THE COUNTRY. ONLY THOSE INFANTS WHO LIVE LONG ENOUGH TO BE BROUGHT

HERE AND BE HISTOCOMPATIBILITY TESTED WILL BE SUITABLE. A DONOR INFANT WILL ALSO HAVE TO BE LARGE ENOUGH, PROBABLY AT LEAST FIVE POUNDS.

AS RECIPIENTS, WE WILL SEEK NEWBORN INFANTS WITH LETHAL CONGENITAL CARDIAC MALFORMATIONS, WHOSE LIFE EXPECTANCY IS NOT LONGER THAN A FEW MONTHS AND WHOSE MALFORMATION IS NOT SUBJECT TO CURRENTLY AVAILABLE PALLIATIVE OR CORRECTIVE SURGERY. INFORMED PARENTAL CONSENT WILL BE NECESSARY, OF COURSE.

MY PRESENT PURPOSE IS TO REQUEST YOUR COOPERATION IN FINDING SUITABLE DONOR BABIES. SEVERAL MONTHS AGO YOUR COOPERATION WAS REQUESTED AND THE RESPONSE WAS MOST GRATIFYING. I WOULD LIKE TO TAKE THIS OPPORTUNITY AGAIN TO THANK THOSE OF YOU WHO WERE ABLE TO RESPOND AT THAT TIME. I SHOULD INFORM YOU THAT DECISIONS TO USE DONORS AND RECIPIENT INFANTS REQUIRE UNANIMOUS AGREEMENT AMONG OUR DIRECTOR OF SURGERY, PEDIATRICS AND OBSTETRICS (GYNECOLOGY).

NO EXPENSE IS INVOLVED TO THE FAMILIES OF THE BABIES CONCERNED. ALL EXPENSES IN TRANSPORTING, ESCORTING, HOSPITALIZATION HERE, SURGERY, ETC., WILL BE BORNE BY A SPECIAL FUND.

WHEN THE NEED FOR A DONOR INFANT EXISTS I WILL TELEGRAPH YOU TO INDICATE OUR NEED. IF YOU HAVE QUESTIONS PLEASE CALL ME AT UL 3 - 1200 AT ANY TIME. DURING OFF DUTY HOURS, A HOSPITAL ADMINISTRATOR WILL PUT YOU IN TOUCH WITH ME.

SINCERELY,

WILLIAM POMERANCE, M.D.

WP/IP