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RESULTS OF THE KIDNEY TRANSPLANTATION IN THE WARSAW CENTER

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The results of kidney transplantation in the Warsaw Center are presented. Among 22 patients operated upon between 1966—1969 13 were alive on January 10, 1970. The follow-up in these patients ranged from 1 to 38 months after kidney transplantation.

Twenty-four from among 43 kidney transplantations performed in Poland were done in the Warsaw Center. The principles of the pre- and postoperative care and the general results are presented in this work.

MATERIAL AND METHODS

Organization. The Warsaw Center is based on the close cooperation on the kidney transplantation between the Department I of Surgery and Department I of Internal Diseases, Medical Academy in Warsaw, Department of Experimental Surgery and Transplantology, Center of Experimental and Clinical Medicine, Polish Academy of Sciences, and a special Immunosuppression Out-patient Department of the I Clinical Hospital in Warsaw. The Departments of Radiology, Urology and Histology, Medical Academy in Warsaw, cooperate with the Center.

Some serological investigations are done with the collaboration of the Institute of Hematology.

The patients with irreversible renal failure selected for kidney transplantation are kept on an intermittent dialysis programme in the Department I of Internal Diseases. The kidneys are transplanted in the Department I of Surgery with the collaboration of the staff of the Department of Experimental Surgery and Transplantology, Polish Academy of Sciences. Immunological studies before and after transplantation are carried out in a special immunological laboratory of the Department I of Internal Medicine and in the Department of Experimental Surgery and Transplantology. After discharge from the hospital all patients are followed in the special Immunosuppression Out-patient Department of the I Clinical Hospital in Warsaw.

Kidney recipients. Twenty-four kidneys were transplanted in 22 patients. There were 13 women and 9 men. The age of the recipients ranged from 17 to 42 years. These patients were in the terminal stage of irreversible renal failure due to chronic glomerulonephritis (16 patients), chronic pyelonephritis (5 patients) and medullary sponge kidney (1 patient). The criteria for recipients selection are presented separately (3). All but one patients were treated before the transplantation with intermittent dialysis. Removal of the patient's own kidneys was done before the transplantation in 2 patients, at the time of transplantation in 12 patients and during the postoperative period in seven patients. Nephrectomy was not done in one patient who died.

Two patients were given second kidney transplant after the rejection of the first one.

Kidney donors. In two cases kidneys were taken from mothers. In the remaining cases the transplantation of cadaveric kidney was carried out. Kidneys were taken from patients who had died because of central nervous system injury (10 cases) or non-neoplastic brain diseases (6 cases). In 6 cases both cadaveric kidneys were used for transplantation. In the remaining cases only one cadaveric kidney was used. The criteria for donor selection are presented separately (3, 4).

Histocompatibility studies. In 2 cases before the transplantation the recipients were tested for the presence of cytotoxic and agglutinating antibodies against donor lymphocytes antigens. In all cases the donor's and the recipient's blood type (ABO erythrocytes antigens) were compatible (6 cases) or identical (18 cases).

Operation. Immediately after the prospective donor's death, the surgical team started the preparation for the removal of the kidney. When the decision was made that the kidneys are suitable for transplantation prospective kidney

recipient was anesthetized and operated upon in a separate unit. Surgical technique of the kidney transplantation is described elsewhere (1).

Postoperative care. The patients after the operation were taken to a special unit isolated from the remaining part of the postoperative room.

Immunosuppression. The basic immunosuppressive therapy consisted in administration of imuran and prednisone. Imuran was given to all patients from the day of transplantation in a daily dose of 3 mg/kg body weight. Later on during the postoperative period the dosage of imuran depended on the white blood count and the appearance of drug toxicity signs. The prednisone administration was started on the day of transplantation. On the first day the dose was 150 mg and was gradually reduced down to 30 mg on the 10th postoperative day. Two patients were given a rabbit antithymocyte globulin and 2 other patients a horse antilymphocyte globulin.

In 5 patients besides the imuran and prednisone, local irradiation of the transplanted kidney was performed to the total dose of 600 r (150 r on the 1st, 3rd, 5th and 7th postoperative days). During the rejection the treatment consisted of prednisone administration in increased dose of 300 mg/daily which was then gradually lowered to that previously used. In addition the patients were given 1000 γ of Actinomycin C in divided doses. Two patients were given the antithymocyte globulin during rejection.

RESULTS

From January 1966 to January 1970 24 kidney transplantations were performed.

Immediate kidney function. In 16 cases the kidney undertook normal function immediately after the transplantation, in the remaining 8 oliguria or anuria developed. These 8 patients were treated with dialyses and in 5 of them the transplanted kidney regained the function between the 8th and 20th postoperative day.

On January 10th, 1970 — 14 patients were alive being from 1 to 38 months after the transplantation (Table I). In 12 of them the function of the transplanted kidney was good of fair, in the remaining one, 12 months after the transplantation, insufficiency of the transplanted kidney developed and at the time of this report he had resumed the chronic dialysis programme.

Nine patients died. The causes of death in these patients are shown in the Table II.

From 12 patients who are alive with good kidney function 10 came back to their home or professional full time work. Two patients in whom the kidney

Table I

General informations concerning kidney transplantations in the Warsaw Center (on January, 10, 1970)

Total number of kidney transplantations	24
Total number of patients	22
Number of patients who received second kidney transplant	2
Number of patients who are alive with good kidney function	12
Number of patients who died	9
Number of patients who were readmitted to the chronic dialysis program	1

Table II

Cause of death after kidney transplantation

Nonfunctioning kidney, generalized sepsis	3 cases
Acute early rejection, generalized sepsis	1 case
Acute pancreatitis	1 case
Pulmonary artery embolus	1 case
Surgical complications of transplantation, generalized sepsis	2 cases *
Accidental death (suicide?) in the course of steroid psychosis	1 case

* These patients died 6 weeks and 5 months, respectively, after the removal of the transplanted kidney.

transplantation was done only 1 month before the preparation of this report are still in the hospital. Detailed analysis of the kidney function and the clinical status of the living patients have been described separately (2).

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