



**METHODS OF EARLY DETECTION OF REJECTION IN A KIDNEY TRANSPLANT FROM
A RELATIVE DONOR**

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Abstract

Kidney transplantation is considered to be the main method in the pathogenetic treatment of diseases associated with acute renal failure and other severe renal insufficiency, and this method is being improved day by day. In this regard, an electronic program has been developed to identify the elements of renal transplantation in place, in a timely manner, individually, and to predict the pre- or postoperative period, as well as early detection of rejection in transplantation.

Keywords. Kidney transplantation, program, histo-immunological suitability.

Currently, a total of 23 dissertations have been defended in the Commonwealth of Independent States on kidney transplantation, and more than 2,000 articles have been published worldwide, 90% of which are on the surgical basis of renal transplantation and immunogenetic conditions (data obtained in 2018). The program we have created mainly warns about the possibility of secondary disease by predicting the patient's condition before and after the illness. The use of transplant-oriented scientific diagnostic and prophylactic programs begins precisely through our software.(1) Using the electronic program, the condition of donor patients preparing for kidney transplantation and undergoing surgery is assessed, indicators are compared, and prophylactic information is provided about the prevention of complications and the recovery period from the disease.

The problem is to solve the medical-biological assessment of the patient's condition before kidney transplantation from the donor to the donor, to see the level of readiness of the patient for the operation, to check the histo-immunological suitability for the organ and its diagnostic assessment. The second challenge is to monitor post-transplant status, prevent complications, monitor immunosuppressive conditions, create a database of laboratory indicators, and organize proper immunoprophylaxis.(2) These problems need to be addressed scientifically. The electronic program we have created performs the software base in solving the scientific problems seen above. The program algorithm first evaluates the patient's complaints. (See presentation) After the second patient anamnesis, the objective examination process is evaluated, the results of physical examinations are entered, laboratory data are entered, and the program automatically evaluates the general condition. advises on what to do.

The program runs on Windows operating system. The program is written in C # (CeSharp) and can meet all modern requirements.(4,6)

In this regard, the program provides information about changes in the donor body and the biological and immunogenic effects of drugs, as it is necessary to take immunosuppressants for the normal



functioning of the human kidney after its permanent placement in the human body. The program includes the following from the patient database.

1. Complaints (abdominal pain, weakness, nausea, fever, headache)
2. Anamnesis (preoperative condition, postoperative condition)
3. Objective examination data (swelling of the eyelids, swelling of the legs, its type and degree, skin color, condition of the lymph nodes, condition of the genitals)
4. Physical examination (auscultation, percussion, palpation)
5. Laboratory data (general indicators of blood, biochemical analysis of blood, general analysis of urine, detection of decoy cells on microscopic examination of urine).

These data can be stored as a lifelong database for a single patient and the patient's condition is predicted by evaluating the progression of the recovery and treatment period by comparing the data of each patient later. Through this program, several different complications are eliminated, through which the patient forms a prophylactic base in the larynx.(3)

Expected results - prevention of pre-disease and post-disease complications of the patient, objective assessment of the patient's condition, comparison of clinical and laboratory indicators, the establishment of a single prophylactic base.

Its scientific and social significance is to conduct kidney transplants perfectly and reduce their recurrence after operations, reducing the number of patients with kidney failure in the future.

Consistency of the results with the results of a global study - to conduct kidney transplants perfectly and reduce their recurrence after surgery, reducing the number of patients with kidney failure in the future.

Opportunities to implement the planned results of the project in practice in the economic and social spheres - The main goal of the project is to establish an electronic diagnostic program in district and city clinics to monitor the condition of patients with kidney disease and properly organize their prevention. Then organize the work of the program online.(3)

Any electronic documents available in the project, the electronic database will be used to assess the health, medical indications of patients with renal insufficiency, which are available in the country. The program prepares the patient for kidney transplantation, prevents complications of the disease and predicts the course of the disease and future processes by checking the compliance of biological, laboratory parameters.(4) You will need computers to use the electronic program. Use of the program database is carried out offline. Based on the implementation of the project, it will be possible to cover 100% of patients with renal insufficiency and form their data into a permanent program. The electronic program evaluates the condition of patients preparing for kidney transplantation and their readiness for the surgical process by reviewing laboratory parameters. Based on this result, the operation and subsequent complications are prevented.(7)

Donor patients face many problems after transplantation due to the presence of secondary diseases. Conversely, due to the lack of control of immune processes after transplantation, due to the ingress of bacteria into the blood, it can be observed that most patients with transplanted kidney complications due to improper organization of prophylaxis. In order to prevent the same processes, an electronic



diagnostic program for early detection and prevention of rejection in a kidney transplant from a relative donor will help us. Through it, laboratory data are intensively compared, evaluated, and the patient's condition is predicted. Analyzes data on how to conduct preventive procedures.

Due to the social and economic significance of the project, misdiagnosis of patients' condition and subsequent medical complications will be reduced, individual assessment of the patient's condition of the program will not go unchecked, and medical prevention of the disease will be strengthened. It is planned to sell the electronic application internationally. Thanks to the mission of this program, we can see the growth of economic and medical diagnostic support in the Republic of Uzbekistan, which prevents the continuing financial costs for the re-treatment of a disease.

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