NEFROLOGIA. Vol. XVI. Supl. 2. 1996

Perspectives of donation and Transplantation in Central Eastern Europe

F. Perner, P. Borka, É. Török, A. Dabóczi, É. Toronyi
Department of Transplantation and Surgery, Semmelweis Medical University, Budapest, Hungary

ABSTRACT

As a result of the profound political changes in the years 1989-90 the physically and psychologically closed borders among eastern countries as well as between western and eastern countries were opened. This resulted in free communication among transplant professionals and a new type of collaboration started among transplantation teams.

Most of Central-Eastern European (CEE) countries started with a kidney transplantation program as early as in the West-European countries. In the CEE countries the transplantation activity was lower compared to the West-European countries, mainly due to financial difficulties, the small number of recipients on the waiting list (insufficient dialysis supply) and lack of political support.

We sent a questionnaire to the key persons of transplantation of nine EEC countries. Six of them sent back the answers which were evaluated and summarized.

In some countries the kidney transplantation program started as early as in the western part of Europe (1962-1967). The liver and heart program started 10-15 years later than in Western Europe.

All transplant organizations (if exists) are «national» and governmental, are controlled generally by the Ministry of Health.

The transplant legislation is solved in most of these countries. The «presumed consent» is accepted except Lithuania.

The proportion of multiorgan donors (MOD) is very poor in all countries, except Poland.

While the demand of extrarenal organs would be high, a great part of donor organs are not used. This one of the reasons of small proportion of multiorgan donation.

The total number of kidney transplantations in 5 years is about 1000 in three countries (Czech Republic, Hungary and Poland) and very few in the other countries.

The conclusions are: 1. In the CEE countries there are much more donors, then used actually. 2. If the small countries manage their transplant programmes by themselves then they have the following difficulties:

– regarding the kidney programme the likelihood of a good HLA match will be low,

– regarding the liver and heart programme they will not have an appropriate donor in case of urgent transplantation or in case of fulminant hepatitis.

INTRODUCTION

With the profound political changes in the years 1989-90 the physically and psychologically closed borders were opened among eastern countries as well as between western and eastern countries. This resulted in free communication among transplant professionals and a new type of collaboration started among transplantation teams. A large number of research and clinical fellowship helped to develop the existing transplantation programs in the Central-Eastern European (CEE) countries. Several programs were started by this type of collaboration. The informations about these programmes are not easily available, because the «transplant activity» does not represent any scientific value, so it is nearly impossible

to publish them. I think this is an unique opportunity to give the statistics about the transplant activity of some EEC countries and complete with my personal opinion about the perspective and future of organ transplantation in these countries.

METHODS

We sent a questionnaire to the key persons of transplantation of nine EEC countries. Six of them sent back the answers which were evaluated and summarizsed. (The material is not complete, because Ukraine, Romania and the European part of the former Soviet Union are not included.)

The first figure shows the participating countries with the number of inhabitants (fig. 1.)

RESULTS

In some countries the kidney transplantation program started as early as in the western part of Europe (1962-67). The liver and heart program started 10-15 years later than in Western Europe (fig. 2). The number of kidney transplantation centres is similar to that of the western countries (1,5-2 mill. pop./1 centre) and the number of centres is in correlation with the transplantation activities (fig. 3). The heart and the liver centres serve more people than in the western countries.

All transplant organizations (if exist at all) are «national» and governmental, and are controlled generally by the Ministry of Health (figs. 4, 5). The financial support comes from the «state» and/or the National Insurance Company. (In each country the role of this company is hegemonic, because all of them have been «national» and «privatized» only recently. They do not have any competitor and do not support sufficiently the expensive «high tech» medical procedures) (fig. 6).

The number of inhabitants

Bulgaria:	8.6 mill.
Croatia:	4.7 mill.
Czech Republic:	10.5 mill.
Hungary:	10 mill.
Lithuania:	3.7 mill.
Poland:	40 mill.
Slovenia:	2 mill.

Fig. 1.

Start of the transplantation program

	Kidney	Liver	Heart	Pancreas
Bulgaria	1968		1986	
Croatia	1971	1990	1988	1993
Czech Rep.	1967	1982	1983	1983
Hungary	1962	1983	1992	
Lithuania	1970		1984	
Poland	1966	1987	1985	1987
Slovenia	1970	1995	1990	1990

Fig. 2.

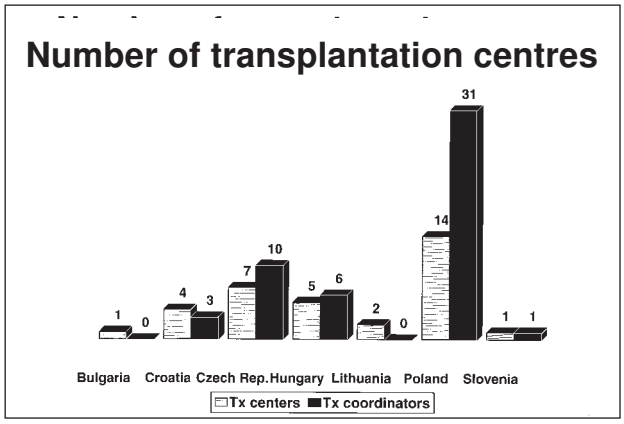

Fig. 3.

National Organizations

- Bulgaria: No national organisation
- Croatia: CROATIATRANSPLANT (1991)
- Czech Republic: CZECH TRANSPLANT (1995)
- Hungary: HUNGAROTRANSPLANT (1993)
- Lithuania: National Renal Patient Association "Gyvastis"
- Poland: POLTRANSPLANT (1993)
- Slovenia: SLOVENIJA TRANSPLANT (1996?)

Fig. 4.

There is a transplant legislation in most of these countries. The «presumed consent» law is accepted everywhere except Lithuania. (Historical background originates from the Austro-Hungarian Empire.) Hungary was the first who established the law in

Fig. 5.

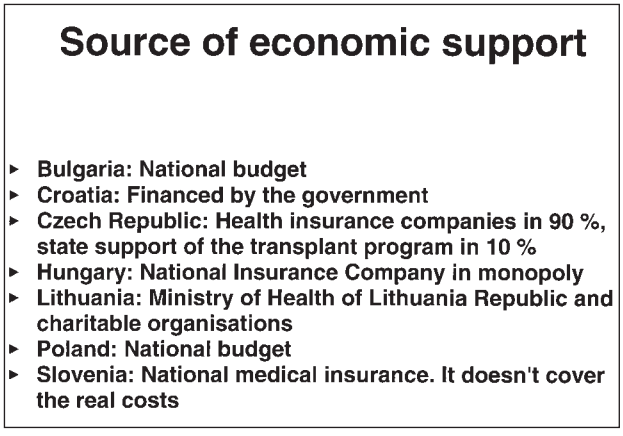

Fig. 6.

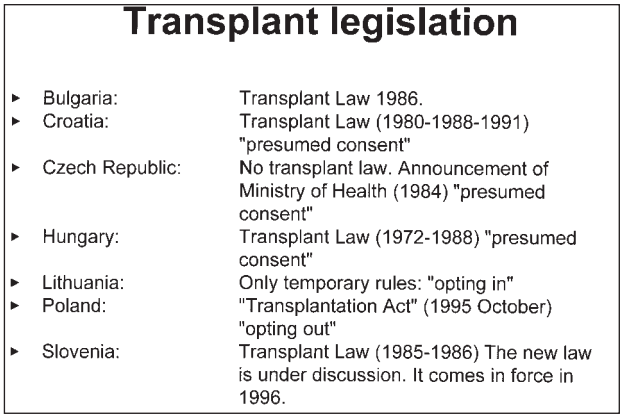

Fig. 7.

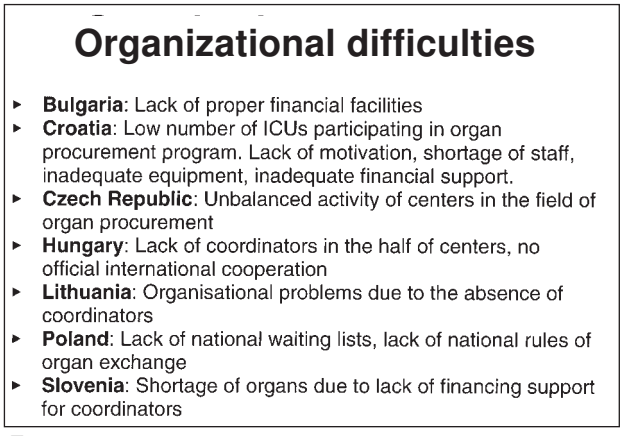

Fig. 8.

1972. The other countries introduced these laws much later (in Poland only last year). I have to emphasise that in these countries the «presumed consent» law is really followed contrary to some western countries. We do not have to ask for the permission of the relatives of the deceased person. (We make them only aware of what is going to happen, and their refusal rate is practically zero.) (fig. 7.)

The figures 8. and 9. show the organizational difficulties and the social and legal barriers. (figs. 8, 9). In the CEE countries the discrepancy between the demand and supply of kidneys is similar to the western countries. In all those countries were the extrarenal solid organ transplant program is functioning, the waiting list is small in absolute numbers as well as per million population (figs. 10, 11). The proportion of multiorgan donors (MOD) is very poor in all countries, except Poland. I have to mention, that the proportion of MOD reached 19,7 % of all donors due to the recommencement of liver transplant program in Hungary in 1995.

Fig. 9.

In those countries where the cadaver kidney transplant program is poor there is an important proportion of living donation (30-46 %) compared to the other countries where that is less then 10 % (figs. 12, 13).

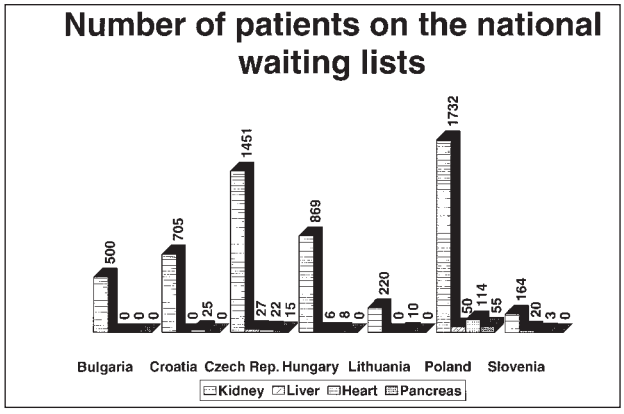

Fig. 10.

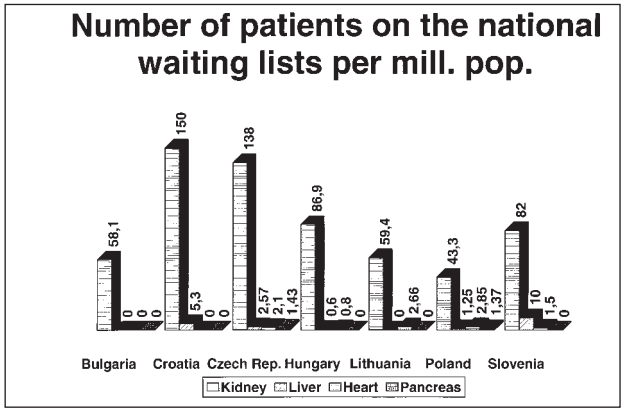

Fig. 11.

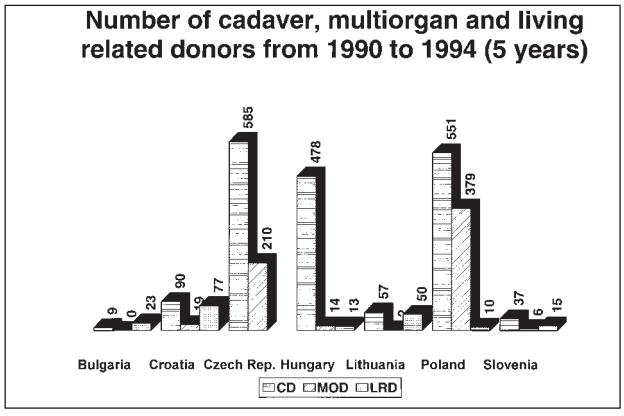

Fig. 12.

The total number of kidney transplantation in 5 years is about 1000 in three countries (Czech Republic, Hungary and Poland) and very few in the other countries (fig. 14). This figures are different if you calculate them per million population and per year.

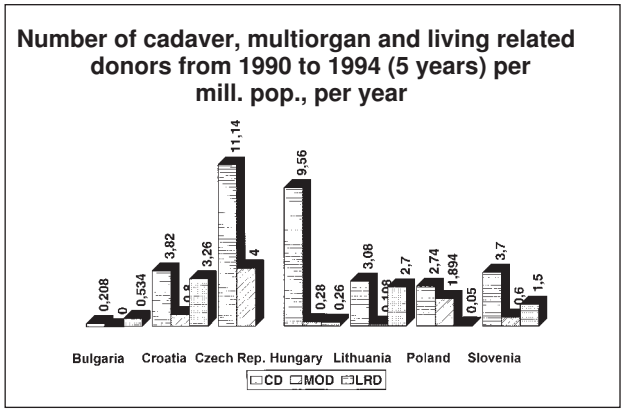

Fig. 13.

With the exception of the Czech Republic and Hungary all other countries show similar figures. This two countries however are at the same levels with the Italians regarding their transplantation activities. Czech Republic and Hungary in these five years reached the half of the European mean (fig. 15). In 1994 Czech Republic largely exceeded the Eurotransplant's mean. Hungary performed more kidney transplantations per million population then Germany and The Netherlands. The other CEE countries did not shown any progress (figs. 16, 17). (In Hungary the progress continued achieving 28,3 kidney transplantations per mill. pop./ per year.)

DISCUSSION

Most of CEE countries started with a kidney transplantation program as early as the West-European countries. In the CEE countries the transplantation activity was lower compared to the West-European countries, mainly due to financial difficulties, the

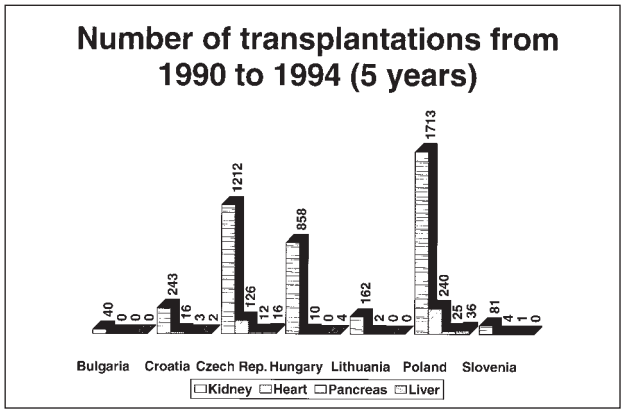

Fig. 14.

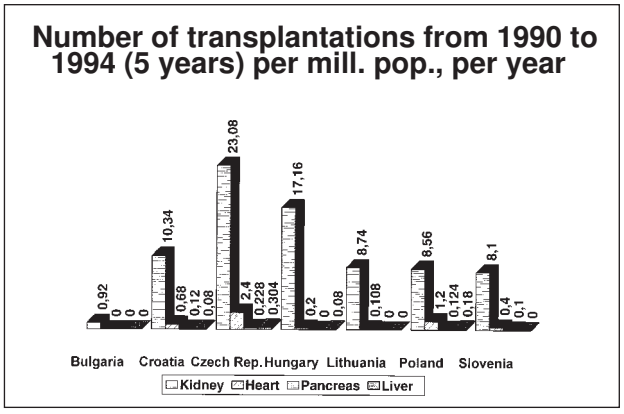

Fig. 15.

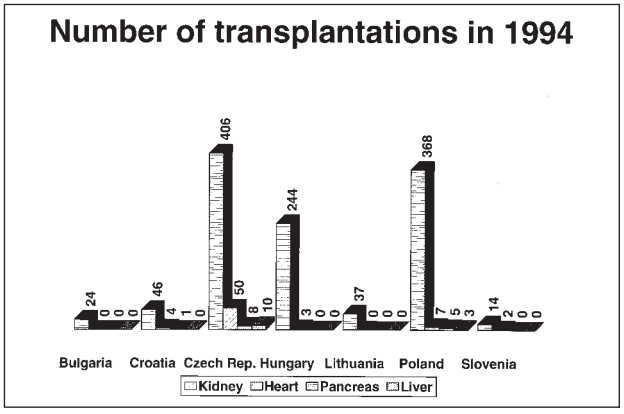

Fig. 16.

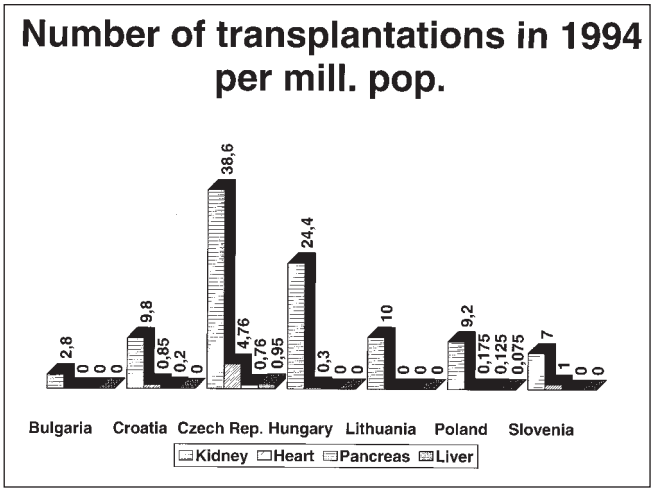

Fig. 17.

small number of recipients on the waiting list (insufficient dialysis supply) and lack of political support. All programs started with some kind of self-initiativeness and enthusiastic attitude of some professionals and of course with agreement and «support» of the actual health politicians.

The legislation is in favour of transplantation (donation) nearly in all countries.

The main obstacle of donation was the attitude of doctors and medical Staff. The education of these people is very important. The type of transplant organization is generally «national». Therefore it is difficult to make contract with other international, private, non-profit organizations. The economical support is also national coming from the state budget or the «state» insurance company. This budget is very poor in all countries. All answer sheets all countries blame the lack of financial support as the main cause of low activity. The lack of personal capacity and equipment is also common as well as the lack of motivation and enthusiasm of medical doctors.

The absence of coordinator system or the small number of coordinators is also hindering the progress. In some countries the organization is only formally national, but national waiting list and accepted allocation rules do not exist. Lack of information in international collaboration can also be the cause of low activities.

The gap is large between number of patients on the waiting list and the number of kidney transplantations in those countries, where the dialysis program is developed.

The heart, liver and pancreas transplantation activity is much lower than in the West-European countries. It's cause is multifactorial. Only one or two centres per countries perform these procedures (question of capacity and distance), limited financial source, few patients on the waiting list (knowledge and confidence from the part of referring colleagues), really small number of suitable donors and no international support.

A very intimate but real reason: in the CEE countries is not a «business» to be a transplant surgeon. The extra effort and supplementary work is not honoured at all.

While the need of extrarenal organs is low, a big part of the donor organs are not used. This is one of the reasons of small proportion of multiorgan donation. Despite the actually low kidney transplantation activity in most countries, there is a real chance of a great development in this field.

The Czech and the Hungarian activity in the last 3-4 years is very progressive. We are convinced that it is due to establishment of the coordinator system, education in the donor hospitals, the large publicity of transplantation, the association of renal patients and a lot of work of some enthusiastic doctors.

CONCLUSIONS

1. In the CEE countries there are much more donors then used actually. The number of inhabitants of this countries are more than 100 millions. The calculated annual number of donors in this region is 450-1500 regarding the present activity (even more could be reached).
   As the transplantation activity of the extrarenal solid organs is low, because of the poor recipient pool and the limited financial support, the CEE countries have a considerable surplus of organs. It is about 500 kidneys, 250 hearts, 300 livers and 400 pancreases.
   These countries can serve as an important source of organs for the Eurotransplant and for the other organizations (countries).
2. The small countries can not manage alone a kidney program with good HLAmatches, neither heart or liver programs, because of the urgent need of these organs (e.g. retransplantation and fulminant hepatitis).
   All these countries need an international collaboration. What can be the solutions of these problems?

POSSIBLE SOLUTIONS

1. To become full member of Eurotransplant or Scandiatransplant (geographical reasons).
   We negotiate with the board of the Eurotransplant about the possibilities of the membership.
2. To become contractual or partial member of ET or other organization in the form of, bilateral base for kidney and extrarenal organs (high urgency heart, liver, hyperimmunized kidney patients).
   In this particular case we have to avoid to become only a source of organs (unidirectional «exchange» program), but we need a real transparent allocation system and reimbursement of real costs of the whole harvesting procedures.
3. To establish some kind of CEE organization. It is logical because these countries have similar number of inhabitants to the ET countries.
   Redistribution of Europe on a geographical basis, i.e. «Alp-Adrien Countries», «Monarchy-Transplant» (countries of the former Austro-Hungarian Empire).
   Europe as a «whole» for extrarenal organs or/and high urgency transplantation and hyperimmunized kidney patients.
   We believe in a very rapid development and progress of organ transplantation in the Central Eastern part of Europe. The western countries have interest to help this process, because during the developing period they have the benefit of the surplus organs and an international, mutual collaboration can strongly serve the patients.

Acknowledgements

Mihail Nikolovski M.D., Bulgaria. Andrija Kastelan M.D., Croatia. Vojtech Martinek M.D., Czech Republic. Valentas Stapulionis M.D., Lithuania. Janus Walaszewski M.D., Poland. Jasna Voncina M.D., Slovenia.