

16 December 2013

## **A MATTER OF NUMBERS**

### **Almost 400 transplants this year**

**By Petra Klusáková**

Patients in Spain have the best chance of obtaining an organ for transplant in Europe. In Spain, 35 organs from deceased donors for every 1 million inhabitants were used for transplants in 2012. The Czech Republic, with a rate of 17.6 organs per 1 million inhabitants, lies in 15th place.

The issue of organ transplants in the Czech Republic has reached a critical stage. The number of organ donors – and the number of actual transplants – has increased since last year. During the first 10 months of this year, 358 kidneys (of which 64 from living donors), 106 livers and 54 hearts were transplanted in the seven specialised centres in the Czech Republic.

This year also marks the 10th anniversary of the creation of the Transplant Coordination Centre (KST), whose main responsibilities are to coordinate safe and high-quality transplantation and to participate in international cooperation in the field of organ donation. Following the amendment of the Transplantation Act, which entered into force in April 2013, the KST acquired a number of new responsibilities. The newly updated law defines more clearly the specialist aspect of the work itself and specifies the doctors' responsibilities.

'The Annex to the Transplantation Act defines clearly the point at which a person can be deemed to be brain dead, sets out the clinical signs of brain death and provides for tests demonstrating the irreversibility of clinical signs of brain death,' says Dr Přemysl Frýda. 'The amendment also lays down penalties for non-compliance with the obligations laid down in the Act, including for healthcare service providers who do not inform the relevant transplant centre immediately of possible organ donors.' Dr Frýda also points out that the source of health insurance reimbursement has changed. 'As of April, all interventions necessary for transplants are covered by the organ recipient's health insurance.'

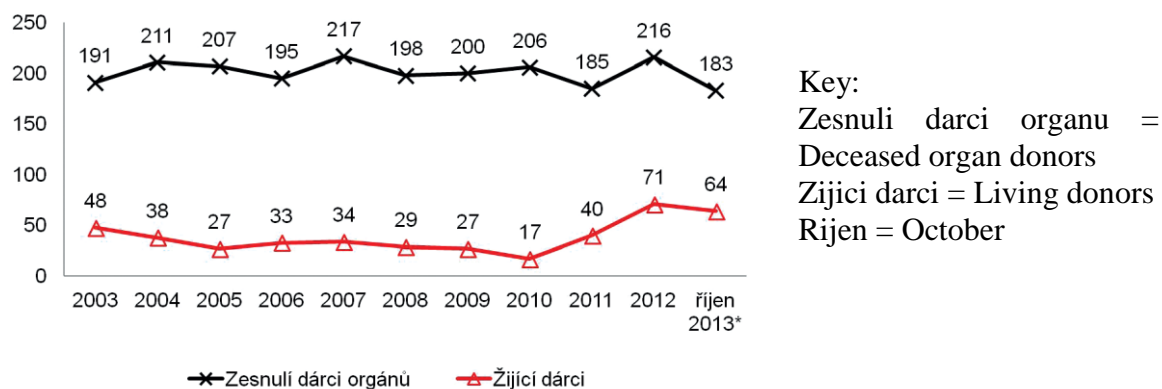
### **We are catching up with the best**

As far as organ donation is concerned, the Czech Republic is among the 15 most successful countries in the world. The KST predicts that we will soon be among the very top countries in the EU. Developed countries such as Canada, Australia and New Zealand are behind us. The USA is not even in the top five.

For a number of years, the country that has led the way is Spain. According to Rafael Matesanz – head of Spain's national transplant programme – speaking at a recent meeting in Brussels of European leaders of transplant policy, 'organ shortage is a universal problem. The key to acquiring organs is regular access to the donor's family, where communication and the coordinator's skills are of paramount importance. Awareness-raising campaigns in this area do not work. There is no proof in specialist literature that such campaigns would have a positive effect on the public in terms of organ donation. There is therefore a clear correlation between generally accepted ideas on organ donation

among the general public and the belief that donation is an integral part of healthcare and, by extension, of the entire health system.'

**Graph 1 - Trend in the number of deceased and living kidney donors in the Czech Republic.** NB: data from January to October 2013 (source: KST)



As Mr Matesanz says, positive media coverage has a strong influence over the public's willingness to donate organs and ensuring that issues surrounding donation are clarified in the family. He also pointed out the detrimental effects of what is known as the panorama effect (whereby any positive perception of organ donation is dented by a negative transplantation story, with the use of organs from either living or deceased donors decreasing considerably in the months after a story is published. A positive approach – devoid of drama or emotional pressure – whereby donation is seen as a legitimate form of treatment, is being pursued by the European Council in Strasbourg in its activities with the public. 'It is vital to raise public awareness, which is one of the most important factors [influencing organ donation], by encouraging people to speak and think about organ donation and to communicate their wishes to their relatives,' says Caroline Larsen Le Tarnec of the European Directorate for the Quality of Medicines and Health Care (EDQM), speaking in Brussels.

| Table: Deceased donors per 1 million inhabitants |      |
|--|------|
| Spain  | 35.3 |
| Croatia  | 33.6 |
| Italy  | 21.8 |
| Czech Republic                                   | 17.6 |
| United Kingdom                                   | 17   |
| Germany  | 14.7 |
| Poland   | 14.4 |
| Slovakia   | 12.5 |
| Bulgaria   | 0.5  |

**In some parts of the country only 5 % on the waiting list**

By far the most commonly transplanted organ are kidneys from deceased donors. Last year in the Czech Republic new kidneys were given to 338 patients; by October this year

294 such transplants from deceased donors had already been recorded. The number of donors with kidney failure on the waiting list recently stood at 10 % of all patients. Across Europe, however, 20, 30 and in some cases 50 % of patients with kidney failure are on waiting lists.

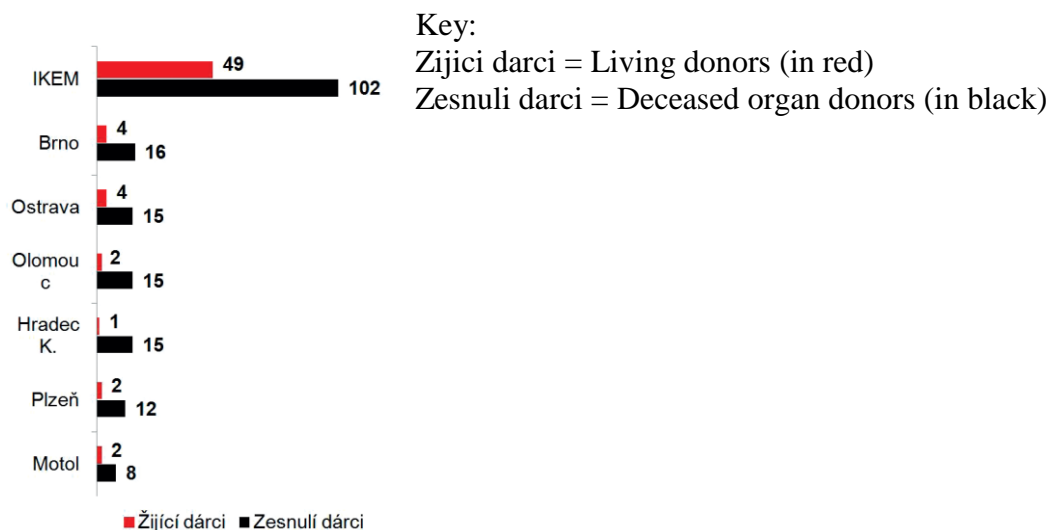
'10 % is the average for the whole of the Czech Republic,' says Dr Jiří Froněk, head of the IKEM transplant clinic. 'Some regions have 20 % of patients with kidney failure on the waiting list, whereas in other regions the rate is just 5 % and even lower. This begs the question of why this is the case and how such patients should be treated,' he said, highlighting the extremely low number of patients on the waiting list.

In the Czech Republic, says Dr Froněk, there is no annual prediction of the number of new patients with various types of liver condition who should be added to the waiting list for liver transplants. 'It is a pity because if we had a forecast of the number of new patients with specific diagnoses we would be able to predict, on the basis of specialist literature, exactly what kind of care would be needed, including the number of transplants,' says Dr Froněk.

### Living donors in transplant chain

In terms of kidney transplants from living donors, the Czech Republic lies in 10th place in the world donor table with 6.8 organs per 1 million inhabitants. The number of living donors in the Czech Republic has risen dramatically: whereas there were 40 donors giving their kidneys in 2011, that figure had risen to 71 in 2012, an 80 % increase. The system of chain transplantation introduced at the IKEM is largely responsible for this rise. In a recent third chain transplantation of kidneys, 10 people were saved: during the course of the 10 operations five donors gave kidneys and five recipients had transplants.

**Graph 2: Comparison of the number of transplants from deceased and living kidney donors in seven workplaces in the Czech Republic**



The quarterly preparation of each of the three paired (chain) transplants, in addition to surgeons and nephrologists, involves the hard work of immunologists and programme coordinators. 'We are unable to carry out transplants for around one third of all donor/recipient pairs examined because of incompatibility, mostly due to different blood groups,' says Dr Froněk. 'We enter all such pairs into the database and every three

months we look for possible exchanges. Since 2011, we have, in this way, conducted 24 transplants, 16 of them in chain form, the remaining eight in pair form.'

### **Interventions hitherto unheard of in specialist literature**

This year, the IKEM has taken the lead in another aspect (shortly after the third chain transplant). The whole team of doctors, along with Dr Froněk, divided a single liver from a deceased donor between two adult patients – a husband and wife who were in a critical condition after being poisoned by a death cap mushroom and who would have died without a liver transplant. At the IKEM this year, a system was introduced whereby a liver from a deceased donor was split between an adult and a child; the IKEM's doctors have performed this operation five times.

However, the critical condition of the husband and wife moved the splitting of a liver onto a level previously unheard of in literature. 'We were in an ethically difficult position,' says Dr Froněk; 'one liver, two patients, something that had never been done before, either in the Czech Republic or anywhere in the world, a hugely demanding task, and everything had to proceed as quickly as possible. If we had performed the transplant on only one patient, the other would certainly have died. Aware of all the risks, I decided to resolve the situation differently.'

The shortage of organs for transplant led the doctors to look for new surgical techniques. 'I am very proud of our doctors,' says Dr Aleš Herman, head of transplantology at the IKEM. 'They have taken another major step into the future of modern medicine. Thanks to them we will hopefully soon be able to help even more patients awaiting a new liver. The IKEM's driving force is saving lives and the use of pioneering procedures. We try to help patients by using all of the methods at our disposal.' .

**Petra Klusáková**